Managing organizational competencies for competitive advantage: The middle-management edge

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Executive Overview

Although most managers recognize that a firm’s competencies are an important source of competitive advantage, many firms encounter difficulties when they attempt to identify and assess those competencies. Specific competencies are often ambiguous to managers, and individual perceptions of a firm’s competencies may vary significantly. This lack of specificity may mask significant misunderstanding and confusion about competencies. When this misunderstanding or confusion occurs among middle managers who are responsible for the day-to-day management of these competencies, the implications for an organization can be serious. We identify and examine key characteristics of competencies and the relationship between middle managers’ perceptions of competencies and firm performance. We report a study of middle managers at 17 organizations in two industries: textile manufacturing and hospitals. Results demonstrate the linkages between competency characteristics and firm success. In addition, we describe a method that any firm can use to assess its competencies, and we show how management can use the assessment to enhance the firm’s competitive advantage.

Managers and scholars often claim that internal, knowledge-based resources, or competencies, may be the most critical sources of competitive advantage. However, we believe that many firms are only vaguely aware of the value of their competencies or the important competencies that they lack. Furthermore, senior executives need to appreciate the central importance of middle managers in developing and maintaining the firm’s competencies.

In this article, we address what we consider to be a critical gap in the efforts of strategic managers to identify and foster competencies that help their firms compete in today’s challenging business environment. We describe several characteristics of competencies and their relationship with competitive advantage. We also examine the relationship between middle managers’ perceptions of competencies and firm performance. We focus on the role of middle managers in assessing competencies because “middle managers often act as the synapses within a firm’s brain, linking shop-floor workers with line managers, and line managers with senior executives.” Although top managers allocate resources to identify, develop, and exploit competencies, they rarely are involved in the day-to-day operations that exploit these competencies. Because middle managers must reconcile top-level perspectives and lower-level implementation issues, they help determine the use of competencies that, in turn, affect firm performance.

Greater understanding and awareness of a firm’s competencies can provide several benefits. Managers who agree on their firm’s most valuable competencies are more likely to be consistent in their decisions to develop and nurture those competencies. Identification of competency gaps—important competencies that the firm is lacking—can point to areas where investment is required to protect or enhance the firm’s competitive position. Assessment of the firm’s competency characteristics can reveal competencies that may lose their value because of imitation by competitors or
changes in the environment. In general, firms that invest the time and effort to assess their competencies can expect to have better information to support strategic decision making.

In our study, middle managers at 17 firms identified and evaluated their firms' most valuable competencies. Specific evidence links firm performance with middle-management awareness and consensus about competencies. We describe a method that all firms can use to identify and assess their competencies, as well as to raise awareness and encourage discussion regarding those competencies. Finally, we provide guidelines to help executives and middle managers use competencies as important tools in generating profits and competitive advantage.

**Characteristics of Competencies**

Competencies combine knowledge and skills; they represent both the underlying knowledge base and the set of skills required to perform useful actions. Competencies capture the sum of knowledge across individual skill sets and individual organizational units. Competencies distinguish the firm and create competitive advantage. In order to be a source of sustainable competitive advantage, a resource or competency must be valuable, rare, and difficult or costly to imitate. In addition, direct or easy substitutes for the competency should not exist.

The most fundamental strategic resources are the knowledge and skills that an organization accumulates over time. Quick imitation of these resources is difficult because they require replication of time-consuming investments in learning. For example, Southwest Airlines developed knowledge and skills that enable it to operate at much lower cost than other major airlines. Competitors that tried to imitate Southwest were not as successful because Southwest built a system of reinforcing competencies that continue to provide the airline with competitive advantage over time.

When evaluating the importance of current or potential competencies, managers have an obvious interest in determining the extent to which these competencies will potentially lead to sustainable competitive advantage. Many companies, however, are poorly equipped to handle the challenges inherent in identifying and evaluating the strengths of their competencies. For example, a large building-materials manufacturing company attempted to initiate a strategic-planning process by identifying core competencies and organizing planning teams around them. The company abandoned its efforts after several weeks because managers experienced difficulty agreeing on their competencies and even more difficulty agreeing on which competencies were most important.

We suggest four characteristics—tacitness, robustness, embeddedness, and consensus—that help determine a competency's value as a source of sustainable competitive advantage. By examining these characteristics, managers can gain insight into the strength of their firms' existing competencies and identify areas in which these competencies may be particularly vulnerable.

**Tacitness: Do competencies resist imitation?**

Tacitness reflects the extent to which a competency is based on knowledge that resists easy codification or communication. A competency can be positioned along a continuum that runs from articulated to tacit. Articulated competencies can be divided into a series of steps or codified into a set of rules that can be communicated either orally or in writing. In contrast, tacit competencies are based on more intuitive knowledge that cannot be fully articulated. For example, articulated knowledge is passed on by the teaching professional to a beginner in tennis, such as how to keep score, how to hold the racket, or how to align one's body for an improved forehand. Tacit knowledge is the skill that top professional tennis players possess to serve an ace or execute a flawless lob during a critical point. A textile CEO described a tacit competency in his firm as follows: "We know it, but it's all in here [pointing to his head] and in the experience-based contacts that you have."

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Tacit competencies are important for competitive advantage because they are context-specific. Tacit competencies, therefore, are much more difficult for competitors to imitate. In contrast, articulated competencies may be replicated more easily in other settings and provide limited or no competitive advantage. For example, important competencies identified by hospital middle managers included training physicians and internal staff on the use of information; managing the continuum of care—pre-hospital, hospital, post-hospital; and managing a wide range of perspectives within the hospital. The steps required to develop and imple-
ment a training program may be listed and easily transferred, and, therefore, represent an articulated competency. Managing the continuum of care is closer to the center of the scale; some aspects of this competency can be codified, but others are tacit. Managing a range of perspectives is a more tacit competency that requires extensive knowledge of the actions and forces at work within the hospital that can be gained only through experience.

**Robustness: Do competencies retain their value in a changing environment?**

Robustness characterizes a competency's insensitivity to environmental change. Robust competencies are not tied to a particular set of external circumstances; therefore, they are more likely to retain value in the face of external change. Robustness can be evaluated along a continuum from robust to vulnerable. Vulnerable competencies are more likely to lose their value because of changes outside the control of the organization, such as technological, economic, or political changes.

Robustness increases the value of competencies by making them more durable. Robust competencies, therefore, contribute to the sustainability of a firm's competitive advantage. In a hospital context, a competency in a specific surgical procedure may lose its value if a noninvasive alternative treatment is developed. Although this competency may be extremely important to the hospital's current competitive advantage, its future contribution is in doubt because of its lack of adaptability to a likely environmental change. In contrast, a competency in cost containment is very robust because it is valuable in a wider range of environmental conditions.

**Embeddedness: Are competencies lost when employees leave?**

The embeddedness of a competency affects its transferability to another firm. A competency's embeddedness can be measured along a continuum from embedded to mobile. Embeddedness is largely determined by a competency's location within the organization. Competencies may be located in the knowledge and skills of key employees; physical systems, such as computer databases, equipment, and software programs; managerial systems, such as incentive systems and reward structures; and organizational mission, culture, or values that screen and encourage different kinds of knowledge. Competencies that reside in the knowledge and skills of employees are the most mobile because employees are mobile. These competencies can be lost if employees leave the firm. At the other extreme, competencies that are embedded in a firm's mission, culture, or values are highly immobile.

Competencies that are located in employees or physical systems are inherently easier to imitate than competencies residing in managerial systems or organizational culture. In a hospital context, the skills of individual doctors are very mobile. In contrast, the combined skills of an established surgical unit represent a less mobile, more embedded, competency. An entire unit is less likely to move to another hospital, and even if it did, it might not be able to replicate all the conditions that made it successful. The provision of a warm and caring environment for all patients is still more embedded, residing in the culture and values of the organization. This resistance to imitation helps a firm sustain competitive advantage.

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**Consensus: Do middle managers agree on competencies and their value?**

Consensus reflects shared understanding or common perceptions within a group. Competency consensus occurs when managers agree on their firm's competitive advantage regarding knowledge and skills that are valuable in an industry. Consensus on firm competencies can also be measured along a continuum, with total unanimity at one extreme and complete disagreement at the other.

The importance of consensus among strategic decision makers is well documented. Most academic attention, however, has focused on consensus among top managers. Senior management should also be interested in middle-management agreement on the competitive advantage of the organization's competencies. Middle managers are responsible for interpreting and communicating broad, top-level vision and strategies to lower-level managers who must execute them. When middle managers agree on the competencies required, they are likely to communicate this agreement to lower-level managers. This agreement and communication help to create a shared understanding of the firm's most valuable sources of competitive advantage, focus the firm's efforts, and
increase the likelihood of successful implementation.

Senior managers should be particularly interested in identifying competencies where their own perceptions differ from those of middle managers. For example, middle managers in one region of a national healthcare provider were unanimous in their belief that knowledge in managing information technology was a strong contributor to the firm's competitive advantage. Middle managers within this region were quick to identify and capitalize on opportunities to strengthen and extend this competency. This agreement resulted in innovative, technology-driven, patient-care protocols that enhanced quality and efficiency. In contrast, middle managers in another region of the same organization disagreed on the competitive advantage of this competency. Although some administrative managers thought that the competency was a potential source of competitive advantage, other managers who were directly involved in patient care believed that its value was limited. As a result, these managers failed to identify specific areas where information technology could contribute to patient care, and this region did not appropriately integrate information technology and patient care. Although senior managers at the national level believed that this competency was very important for competitive advantage, disagreement among middle managers across regions did not allow the organization to adopt innovative and improved approaches to patient care throughout all regions.

Why the Middle-Manager Perspective is Crucial

Middle management ... is a very, very important part of the puzzle when you talk about competencies.

—CEO of a leading U.S. textile firm

Middle managers play an essential, but often unappreciated, role in successful strategy making. Middle managers' participation in strategy formulation is associated with improved firm performance, and their commitment is critical to successful strategy implementation.

Middle managers’ experiences with implementation decisions and their consequences provide an excellent foundation for assessing competencies. Middle managers may have insight into the strength of competencies that top managers lack, and they are also in an excellent position to identify competency gaps with respect to products, technologies, or competitive markets. Middle managers are essential linchpins for identifying and implementing competencies, often holding together relationships that are necessary to facilitate competencies. Middle managers, therefore, are vital catalysts for identifying, developing, and implementing competencies.

Monitoring middle managers' perceptions, however, is more easily said than done. The number and geographic dispersion of middle managers make them difficult to track. In many companies, top managers meet routinely, but meetings of middle managers across the firm may be infrequent. Operational considerations may make it virtually impossible to hold a meeting of all the firm's middle managers.

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By examining middle managers' perceptions of competencies, top management can gain enhanced understanding of the strength of the firm's current competencies and identify areas where competencies need to be strengthened or developed. This understanding can be a crucial first step in an ongoing process toward the ultimate end of strengthening existing competencies or developing new competencies that contribute to sustainable competitive advantage.

Insights From a Field Study

We drew from the concepts discussed above to develop and test measures of competencies and their characteristics. Our research also addressed the following question: Are middle managers' perceptions of competency characteristics important to strategic success? We collected information from more than 200 managers in 17 organizations in two dissimilar industries: textile manufacturing and hospitals. Top and middle managers identified competencies and assessed the extent to which their firms were at a competitive advantage or disadvantage for each competency, rating the competencies' tacitness, robustness, and embeddedness. Table 1 contains examples of competencies for both industries.

We found that organizations in which middle managers described their competencies as more tacit, more robust, and more embedded tended to outperform those that did not. These results sup-
port our previous arguments that these characteristics add value.

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We also found that middle-management consensus on competencies is associated with high firm performance. Middle managers in higher-performing organizations demonstrated higher consensus on the organization's competencies that provide competitive advantage. Middle managers who agree on competencies provide an organization with tremendous potential for developing, leveraging, and exploiting knowledge. They possess a strong base of related knowledge and realize that much of the value of competencies arises from assimilating and transferring new knowledge for use throughout an organization. The results corroborate Floyd and Woolridge’s claim that “certain middle-management behavior is crucial to developing organizational capability. This is a learning process which calls on organizations to interpret the world, uncover new market opportuni-

ties, focus existing resources, and accumulate new resources.”

Our study revealed two additional patterns regarding middle-management consensus. First, although overall consensus on competencies is associated with higher firm performance, consensus on the more narrow range of distinctive, or core, competencies (those rated highest by managers in terms of competitive advantage) appears to be an even stronger indicator of high performance. This result indicates the value of a clear understanding of competencies that distinguish a firm’s competitive position. Second, middle managers in lower-performing firms often revealed consensus regarding competencies at which their firms were at a competitive disadvantage (those rated lowest by managers in terms of competitive advantage). This suggests that identifying and analyzing consensus on competencies among middle managers may reveal competitive problems to top managers and reinforce the need to take action.

Our results show that middle-manager consensus is associated with successful performance, but this does not necessarily mean that agreement causes success. Another explanation could be that an organization’s success leads to greater agreement on important competencies. Regardless of the direction of causality, a competency assessment can provide managers with useful information. In particular, both the lack of consensus on competencies in general, and strong consensus on competencies where the firm is at a competitive disadvantage, are associated with lower performance. Identification of competencies where middle managers either disagree or believe their firm is at a competitive disadvantage can highlight areas where management attention and intervention are needed.

Figure 1 displays the pattern of middle managers’ responses regarding 36 competencies in one high-performing textile firm and one low-performing textile firm. Overall, middle managers in the high-performing firm tended to agree more on competencies than their counterparts at the poor performer. In addition, this figure reveals that middle managers in the high-performing firm tended to agree more on competencies that contribute to high competitive advantage, whereas the low-performing firm shows higher levels of agreement on competencies where the firm is competitively disadvantaged.

During our interviews, CEOs expressed a great deal of interest in the perceptions of middle managers. As one textile CEO said, “We are evolving from a top-down hierarchical organization to a broader frame of reference. I am curious about

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<th>Examples of Organizational Competencies</th>
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<tr>
<td>Textile firm</td>
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<tr>
<td>• Knowledge and skills to facilitate international transportation logistics</td>
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<tr>
<td>• Technological knowledge that differentiates the company through product change, quality, and cost</td>
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<td>• Capability in developing young talent</td>
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<td>• Knowledge and skills to encourage and gauge accountability at the individual level</td>
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<td>• Knowledge and skills to link operational goals and objectives to compensation plans</td>
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<td>• Process-reengineering knowledge to maintain and improve cost efficiencies</td>
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<td>• Knowledge to compete in a global marketplace</td>
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<td>• Managing costs</td>
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<tr>
<td>Hospital</td>
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<tr>
<td>• Capability in competing flexibly—ability to move quickly, start programs, close programs, seize opportunities</td>
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<tr>
<td>• Knowledge in managing the continuum of care—pre-hospital, hospital, post-hospital</td>
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<td>• Knowledge in managing information technology, such as tying in physicians’ practices through online medical records and imaging services</td>
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<tr>
<td>• Attracting top management staff</td>
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<td>• Training physicians and internal staff on use of information</td>
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<td>• Knowledge in managing risks</td>
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whether there is agreement—that's why I am interested in the study. I feel comfortable that my top people will agree but feel less comfortable as you go down to lower levels.” Another textile CEO lamented that an unfortunate cost of growth was a gap between top and middle managers' perceptions. After a decade of restructuring and right sizing that decimated many middle-management positions, top managers increasingly recognize that “a company can survive everything but the defection of its middle managers.” Similarly, organization theorists and the popular press recognize that flattened organizational structures and network organizations involve shifts in strategic responsibilities to managers outside the top-management team. Recent models of knowledge management recognize that middle managers are key repositories and conduits of valuable knowledge.

Assessing an Organization’s Competencies

Based on the experience gained in our multiorganizational study, we offer a process framework that organizations can use to understand middle managers' perceptions of competencies and the key characteristics of these competencies. The steps are outlined below.

Step one: Identify competencies

The purpose of this step is to develop a list of valuable competencies in the organization's industry. It can be accomplished by a combination of interviews and industry research. People from within or outside the organization may conduct the interviews, but the interviewers should take the role of objective researchers or consultants when gathering the information. We recommend interviewing all members of top management and six to 15 middle managers. Ideally, participants should have a diverse range of experience and tenure within the organization and the industry. Participant confidentiality is important to avoid attempts to give the right answer, that is, responses favored by the CEO or a superior.

The interviews normally take about one hour. To start, the interviewer explains the purpose of

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the meeting and defines the meaning of a competency. Participants then list the competencies that they believe are valuable in the industry. They are encouraged to identify the competencies that lead to their or their competitors' competitive advantage. The interviewer summarizes the list of competencies and returns it to the participant for review. Normally, responses about valuable competencies will begin to converge after seven to nine interviews. In most industry contexts, a list of 30 to 40 competencies provides good coverage.

**Step two: Assess characteristics**

The purpose of this step is to analyze the characteristics of the competencies identified in step one. It is accomplished by preparing a questionnaire and collecting information from both top and middle managers. Information can be gathered from all middle managers or from a representative sampling. Questionnaires are mailed to each respondent with instructions to complete them anonymously.

For each competency, managers rate the extent to which the organization is at a competitive advantage or disadvantage. The average and the variance for each competency are then calculated for both the top-management group and the middle-management group. The average represents the perceived level of competitive advantage conferred by that competency. The variance represents the degree of consensus among the management groups. Questions similar to those presented in the appendix can assess middle managers’ perceptions of the tacitness, robustness, and embeddedness of all, or a subset of, the competencies. This information can be compiled into a profile for each competency similar to those presented in Table 2.

**Step three: Develop conclusions and report findings**

The purpose of this step is to interpret the data, identify areas of concern, and draw conclusions.

After profiles are developed for each competency, the analysis focuses on core competencies (rated high for competitive advantage), inadequate competencies (rated low for competitive advantage), and competencies for which top and middle managers’ assessments differ significantly. Areas of concern (e.g., a highly rated competency that has a low score on any of the characteristics) are highlighted for further analysis.

For example, the competencies profiled in Table 2 suggest several areas for further exploration and action. Management should try to determine the reasons for low consensus regarding the competitive advantage of the first competency, knowledge to compete in a global marketplace. This could be a major opportunity or a potential problem, depending on the source of disagreement. Capability in developing young talent is highly rated, but appears to be weak in both tacitness and embeddedness. Management should not expect this competency to be a source of sustainable competitive advantage unless it can be made more tacit and more embedded. Developing the tacitness and embeddedness of a competency often requires considerable time and resources. Management, therefore, must devote serious analysis and investment to determine and follow through on the appropriate course of action. Managing costs should be a major area of concern because middle managers agree that the company is at a severe competitive disadvantage. Not surprisingly, this weak competency is perceived to be very low in all three of the characteristics.

All participants should be provided with a report summarizing the findings and describing the characteristics of competencies essential to competitive advantage. Participating managers should have the opportunity to provide feedback about the report. Ideally, the report serves as a basis for roundtable discussions that create greater insight into competencies in general and greater consensus about the organization’s most important competencies.

**Table 2**

Sample Organizational Competency Profiles

<table>
<thead>
<tr>
<th>Competency characteristic</th>
<th>Knowledge to compete in a global marketplace</th>
<th>Capability in developing young talent</th>
<th>Managing costs</th>
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</thead>
<tbody>
<tr>
<td>Competitive advantage</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Middle-manager consensus</td>
<td>Low/Moderate</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Tacitness</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Robustness</td>
<td>High</td>
<td>Moderate</td>
<td>Low</td>
</tr>
<tr>
<td>Embeddedness</td>
<td>Low/Moderate</td>
<td>Low</td>
<td>Low</td>
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Using the Information to Strengthen Competitive Position

A competency assessment provides top management with a wealth of information about middle managers’ perceptions of their organization’s competencies. Although we focus on a process that can help involve middle managers in knowledge management, we want to emphasize that evaluating a company’s existing competencies is not the same as determining the right competencies for the company’s future competitive position. Similarly, building consensus on the firm’s competencies is important, but does not guarantee that the firm’s managers will correctly identify the competencies that will be most important in the future. Our competency assessment process provides managers with valuable information, but developing competencies also requires managers to make difficult decisions and manage complex tradeoffs among alternative investments in knowledge.20

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Understanding the characteristics and competitive advantage of existing competencies, however, provides a foundation that facilitates development of the competencies needed to support competitive success. Investments must be made in building consensus and improving the tacitness, robustness, and embeddedness of these competencies. In this section, we provide suggestions about how management can act on the information gathered in a competency assessment to improve the organization’s competitive advantage.

Tacitness: Developing competencies that resist imitation

Japanese knowledge-management scholars criticize Western management practices that ignore the critical importance of middle managers and tacit knowledge.24 They claim that Westerners overemphasize top managers and explicit knowledge and, therefore, often miss valuable strategic opportunities. They argue that innovation emerges from a cycle of middle-up-down knowledge transformation, where valuable knowledge often emerges among middle managers and is pushed up to top levels. The most valuable knowledge is often tacit, and according to this argument, effective firms undergo disciplined cycles of making the knowledge explicit as it is communicated throughout the organization. The efforts to transfer knowledge, in turn, create valuable tacit knowledge that continues in this virtual cycle. Although it may be difficult to capture in a strictly codified form, the tacit knowledge underlying many of the most valuable competencies is often communicated through shared experiences or stories and narratives.25 Senior managers, therefore, can use the information gathered from our process to manage the virtual cycle of developing competencies. For example, middle managers may be encouraged to share stories regarding key tacit competencies to exploit their most valuable elements. In addition, these stories may help transfer competencies within the firm, building a new set of tacit experiences that add deeper value.

Robustness: Building competencies that withstand change

Middle managers often recognize environmental threats and opportunities that influence the sustainability of current competencies and reveal future ones that require investment. Andrew S. Grove, board chair of Intel, seeks understanding of important trends and changes in the competitive environment through interactions with middle managers whom he calls Cassandras, referring to the priestess who prophesied the fall of Troy.26 Given the chance, these managers provide valuable real-time insights into emerging problems and opportunities. Our process provides an effective vehicle for soliciting middle managers’ feedback on environmental events and trends. After receiving this feedback, top managers must focus on the external activities that warrant strategic attention, looking for patterns in the external threats to critical competencies. For example, a number of hospital middle managers expressed concern about their organization’s ability to hire and retain the right people. This feedback suggests that top management should consider developing or acquiring additional competencies in human resources recruitment and management. Further investigation can help senior managers determine whether these issues reflect everyday concerns of managers or reveal emerging trends that have genuine potential to disrupt the business.

Top managers can also capitalize on middle
managers' understanding of environmental opportunities, potentially extending the robustness of current competencies, as well as developing future competencies that sustain competitive advantage despite environmental changes.

**Embeddedness: Creating competencies that are difficult to duplicate**

Competencies that reside in the organization culture are less vulnerable to appropriation by competitors. Certain competencies can be achieved only by groups and cannot reside at the individual level. "A single basketball player cannot play a game of basketball by herself; only the several players, together as a team, are able to carry out the team's strategies, moves, and style of play. A violinist alone cannot perform Mahler's Third Symphony; the execution of the phrasing, dynamics, and tempi of the piece requires the collective actions of the orchestra as a group." Our research reveals that middle managers in better-performing firms believe that key competencies are orchestrated in ways that reside in their organization's culture. Understanding middle managers' perceptions, therefore, can reveal valuable group-level competencies that are facilitated by the organization's culture. For example, in a corporate video, Herbert D. Kelleher, CEO of Southwest Airlines, describes the firm's competency in turning planes around quickly as having a "balletic quality," as all the different workers perform their tasks. Because embedding competencies is difficult and time-consuming, efforts to identify how the organization's culture promotes embedded competencies can provide invaluable insights.

In addition, middle managers' perceptions of embeddedness have implications for knowledge retention and storage. Competencies that are created and then are lost or become inaccessible are not a source of competitive advantage. Managers need to ask whether competencies go home in the evening or how competencies may be protected or moved around. Managers' perceptions regarding competency embeddedness may also help organizations recognize where valuable competencies reside before they walk out the door with the loss of key managers. Several middle managers we surveyed indicated that low turnover was critical to sustaining the competitive advantage of important competencies. This is a crucial first step in understanding where turnover makes the firm most vulnerable.

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**When to exploit, expose, explore, or exclude**

Floyd and Wooldridge describe middle managers as "reservoirs of capability." Our research reveals that consensus on competencies, particularly important competencies, is closely related to

<table>
<thead>
<tr>
<th>Middle-management consensus</th>
<th>Level of competitive advantage</th>
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<tr>
<td>High</td>
<td>EXPLORE these competencies, which require further analysis to determine whether they are opportunities or signs of trouble.</td>
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<tr>
<td></td>
<td>EXPOSE these competencies, which represent critical vulnerabilities that require immediate action.</td>
</tr>
<tr>
<td>Low</td>
<td>EXCLUDE these competencies, which do not merit strategic focus in the near term.</td>
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**FIGURE 2**

Organizational Competencies and Recommended Management Approaches
organizational success. Figure 2 shows four broad categories of competencies, grouped according to middle managers’ perceptions of their competitive advantage and the level of middle-manager consensus regarding their ranking. We offer four approaches that can help firms achieve strategic advantage based on various combinations of consensus and competitive advantage.

- **High consensus, competitive advantage: Exploit.** These competencies provide the most valuable platforms for competitive success. Senior managers should continue to invest in them to capitalize on the revealed opportunities. At the same time, however, senior management should carefully monitor whether these competencies are robust or vulnerable to potential environmental or market changes that may render them obsolete.

- **High consensus, competitive disadvantage: Expose.** Competencies that fall in this category may provide critical vulnerabilities that other firms can exploit. These require immediate attention to assess the risk associated with this disadvantage and the reasons that it exists.

- **Low consensus, competitive advantage: Explore.** These competencies may reveal excellent opportunities or early signs of trouble, creating the need to explore the sources of disagreement regarding these competencies. Are there patterns of disagreement that lead to low consensus? Does one functional or geographic group have a radically different perspective, or are levels of disagreement similar among groups? If one group appears to be the source of disagreement, deeper exploration is needed to understand whether this group is a leader or a laggard in recognizing the true value of these competencies.

- **Low consensus, competitive disadvantage: Exclude.** Firms cannot excel on all competencies, and our research reveals that even managers in high-performing firms identify competencies in this category. They are not critical to a firm’s near-term strategic arsenal and do not merit significant strategic focus at the time. Because these competencies may be sources of future competitive vulnerabilities, however, managers need to be particularly aware of environmental changes that may increase their importance.

### Managing Competencies for Competitive Advantage

Many recent articles have discussed the importance of managing competencies and managing organizational knowledge for competitive advantage. Few executives, however, are comfortable that their organizations possess the skills and processes to manage knowledge effectively. One article describes companies that are so desperate "to make the leap to the knowledge era" that they submit managers to consultants who "encourage them to meditate (particularly during meetings), and go on retreats (where they test their physical skills, before relaxing to the bongo drums)."

Our research clarifies the competency concept in ways that may help managers make the leap to the knowledge era while avoiding New Age fads. In addition, we highlight four characteristics of competencies that can add insight to strategic decisions. These ideas provide valuable clarification and tools that managers can use to effectively achieve the ultimate goal of identifying, developing, and communicating the competencies that best further the firm’s competitive position. Managers should aim to create a handful of ideal competencies that are highly rated for all characteristics. Important competencies that fall short on one or more of these dimensions merit purposeful consideration and organizational action.

Evidence shows that middle management consensus on competencies is associated with higher performance. If organizations are serious about effectively managing competencies, the results of this study suggest that managers should maintain a dialogue regarding their organization’s competencies. An ongoing conversation regarding competencies allows managers to monitor their organizations’ competencies, and consensus about competencies, in a timely fashion. Organizations should institute processes that seek middle managers’ perceptions of organizational competencies. These processes may include surveys or forums that allow middle managers to communicate their beliefs about valuable competencies. In addition, managers can utilize information technology and corporate intranets to facilitate online communities of middle managers throughout an organization. These processes may help anticipate the competencies the firm will need to develop for future success, as well as contribute to building consensus.

Managers may wish to periodically examine competency tacitness, robustness, and embeddedness. This process may provide early warnings when organizations are counting on competencies that are less likely to contribute to strategic success. For example, if managers believe that a particular competency is very important to strategic success, and if this competency is not tacit, robust, or embedded, decision makers should be concerned and take appropriate action. One textile CEO discussed his company’s efforts to develop the competencies required to compete in a more global environment. Recognizing that the firm’s
parochial culture was an obstacle, top management deliberately and painstakingly set out both to transfer the knowledge required and to change the culture in ways that would facilitate embedding the new competencies.

Decision makers who follow our competency-assessment process may identify important trends or changes early; those who do not may find themselves committing money and effort to competencies that are unlikely to contribute to sustainable value. This dialogue about competencies also may contribute to effective knowledge utilization in organizations by building agreement, increasing tacitness, and recognizing the robustness and embeddedness of key competencies.

Appendix

How to Measure Dimensions of Organizational Competencies

Consensus Measure

Competencies are knowledge and skills that may provide competitive advantage to an organization. In this section, we provide a list of competencies in your industry. For each competency listed, please indicate whether your organization is currently at an advantage or disadvantage with respect to your competition.

Taoitness Questions

Please indicate how much you agree with each statement:
1. In my firm, extensive employee training is offered specifically regarding this competency.
2. There is extensive written documentation of this competency in my firm.
3. A useful manual or handbook to describe the knowledge necessary for this competency could be written.
4. A competitor could acquire this competency by analyzing trade or other publicly available publications.

Robustness Questions

Please indicate your opinions on how vulnerable this competency is to changes outside the control of the firm. We are interested in changes that you believe have a reasonable chance of happening over the next two to three years.
1. Technological changes threaten the competitive advantage of this competency.
2. Economic changes (e.g., recession, inflation) threaten the competitive advantage of this competency.
3. Political changes (e.g., major legislation) threaten the competitive advantage of this competency.
4. Other changes threaten the competitive advantage of this competency. (Please specify.)

Embeddedness Measure

Valuable competencies can be located in a variety of places in an organization. Please take a moment to review four places that we have listed. With regard to this competency at your firm, please distribute 100 points among the four places to indicate where this competitive advantage is located:

<table>
<thead>
<tr>
<th>Points</th>
<th>Employee Knowledge and Skill</th>
<th>Physical Systems Such as Computer Databases, Equipment, and Software Programs</th>
<th>Education and Incentive Systems That Support and Reinforce Knowledge Growth</th>
<th>Organizational Mission, Culture, or Values That Screen and Encourage Different Types of Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>50</td>
<td>20</td>
<td>30</td>
<td>0</td>
</tr>
</tbody>
</table>

Endnotes

6. The company cannot be named because of a confidentiality agreement.
7. This and other quotes are taken from the authors' interviews with managers from hospitals and textile companies.


16 Middle managers' perceptions were positively correlated with organizational performance. Patterns of top-management responses were less consistent. However, analysis of both top- and middle-management data revealed the importance of top- and middle-management alignment. To further analyze the patterns of middle-manager consensus, we split the sample into three groups. The return on assets (ROA) cutoffs for each industry are as follows:

<table>
<thead>
<tr>
<th>ROA</th>
<th>High-performing</th>
<th>Average</th>
<th>Low-performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile</td>
<td>6.92 to 11.16</td>
<td>4.44 to 5.33</td>
<td>-0.66 to 3.49</td>
</tr>
<tr>
<td>Hospital</td>
<td>6.98 to 10.79</td>
<td>3.71 to 4.78</td>
<td>1.69 to 2.89</td>
</tr>
</tbody>
</table>

For additional analysis and discussion, see King & Zeithaml, op. cit.

17 Floyd & Woolridge, Dinosaurs or dynamos? op. cit., 47.

18 It was interesting to note, however, that there did not appear to be any industry "recipes for success" because the core competencies differed across firms in the same industry. This is a logical result because the process was designed to identify a range of competencies that lead to competitive advantage in an industry, and a variety of organizational proficiency is necessary to outperform others with whom one competes.


22 This process extends the internal organizational-assessment process suggested by Duncan et al., op. cit., by introducing tools to assess critical competency characteristics and by presenting a process that can include a wide range of important decision makers, particularly middle managers.

23 The authors wish to thank an anonymous reviewer for helping us clarify this discussion.

24 Nonaka & Takeuchi, op. cit.


29 Floyd & Woolridge, Strategic middle manager, op cit.


31 The Economist, The knowledge, op. cit.

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