Competitor Identification and Competitor Analysis: A Broad-Based Managerial Approach

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Managerial myopia in identifying competitive threats is a well-recognized phenomenon (Levitt, 1960; Zajac and Bazerman, 1991). Identifying such threats is particularly problematic, since they may arise from substitutability on the supply side as well as on the demand side. Managers who focus only on the product market arena in scanning their competitive environment may fail to notice threats that are developing due to the resources and latent capabilities of indirect or potential competitors. This paper brings together insights from the fields of strategic management and marketing to develop a simple but powerful set of tools for helping managers overcome this common problem. We present a two-stage framework for competitor identification and analysis that brings into consideration a broad range of competitors, including potential competitors, substitutors, and indirect competitors. Specifically we draw from Peteraf and Bergen's (2001) framework for competitor identification to develop a hierarchy of competitor awareness. That is used, in combination with resource equivalence, to generate hypotheses on competitive analysis. This framework not only extends the ken of managers, but also facilitates an assessment of the strategic opportunities and threats that various competitors represent and allows managers to assess their significance in relative terms. Copyright © 2002 John Wiley & Sons, Ltd.

INTRODUCTION

Competitor identification is a key task for managers interested in scanning their competitive terrain, shoring up their defenses against likely competitive incursions, and planning competitive attack and response strategies. It is a necessary precursor to the task of competitor analysis, and the starting point for analyzing the dynamics of competitive strategy (Smith *et al.*, 1992). Before one can assess the relative strengths and weaknesses of rivals, or track competitive moves and countermoves, one must first identify the competitive set and develop an accurate sense of the

domain in which strategic interactions are likely to occur.

The purpose of this paper is to provide a set of tractable frameworks for competitor identification and competitor analysis that facilitate broad environmental scanning. To inform our frameworks, we borrow from Peteraf and Bergen's (2001) framework for competitor analysis. Their work borrows from Chen's (1996) model of competitor analysis, adapting his constructs to our purposes by drawing on the marketing literature on consumer behavior (Levitt, 1960; Nedungadi, 1990; Peter and Olson, 1993, Mowen and Minor, 1995). Specifically, we bring into sharp focus the role of customer needs in defining the marketplace to show how a greater recognition of customer needs can expand awareness of what lurks on the competitive horizon. This allows us to address a supply side bias that is often present in

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other approaches to competitor identification (Clark and Montgomery, 1999). Moreover, we use this to develop a hierarchy of competitor awareness that is central to our hypotheses on competitor analysis. Further, we introduce the concept of resource equivalence to facilitate the comparison of the abilities of indirect and potential competitors to meet the same set of customer needs as direct competitors. This allows us to offer a differentiated approach to competitor analysis.

From a theoretical standpoint, our frameworks contribute to the development of the stream of literature in strategic management on competitive dynamics (Smith *et al.*, 1992; Chen *et al.*, 1992; Chen and MacMillan, 1992; Miller and Chen, 1994; Chen and Hambrick, 1995; Ferrier, *et al.*, 1999; Grimm and Smith, 1997) and indeed anchor this literature at its logical starting point. From a practical standpoint, our approach offers a markedly different perspective on competitor identification and analysis, which has important implications for managers. Moreover, it provides a mechanism for evaluating competitive threats and opportunities by comparing firms on the basis of their capabilities to meet market needs.

THE MOTIVATION

Competitor identification serves as an important function in several fields. In industrial organization economics, it is associated with the task of defining markets, which is critical for antitrust and regulatory policy. In marketing, it supports the analysis of pricing policies, product design, development and positioning, communications strategy, and channels of distribution. In strategic management, it provides a foundation for competitor analysis and the analysis of industry structure, conditions of rivalry, and competitive advantage.

One important objective of competitor identification is to increase managerial awareness of competitive threats and opportunities. To maximize awareness, it is essential to survey the competitive landscape broadly in the initial stages of analysis. This can help managers avoid the dangers of a myopic approach to competitive strategy and will minimize the chance of being blindsided. It can reduce a firm's vulnerability to competitive blindspots (Zajac and Bazerman, 1991), which are particularly troublesome in

settings in which industry boundaries are not well defined or are very fluid and changeable. For example, in emerging industries, in turbulent, high velocity environments (Eisenhardt and Bourgeois, 1989), or in hypercompetitive contexts (D'Aveni, 1994), there may be a temptation for managers to pay attention only to competitors who display a product or technology overlap, because these competitors are salient and because the task of broad scanning is difficult. However, it is in these settings that competitive encroachments and incursions across boundaries by indirect and potential competitors may prove to be the greatest threat.

A variety of approaches have been developed to address the task of competitor identification that are congruent with market definition. Sophisticated quantitative approaches to defining markets include the analyses of cross-price elasticities, of residual demand curves, of price correlations, and of trade flows using methods such as the Elzinga–Hogarty approach (Elzinga and Hogarty, 1978).[1] Scheffman and Spiller (1987) provide an overview of classical quantitative approaches to market definition.

Qualitative methods tend to be more ad hoc and are based on the idea that products are in the same market if they are close substitutes. Products are judged to be close substitutes when they are similar in terms of their performance characteristics, occasions for use, and when they are sold in the same geographic market (Besanko *et al.*, 1996). Qualitative methods derived from economics rest on the notion that a market is defined as a 'set of suppliers and demanders whose trading establishes the price of a good' (Stigler and Sherwin, 1985). Cognitive methods, in which managers and /or customers are queried about which products are in competition, are more common in the field of organization theory, which views markets as social constructions (See, for example, Porac and Thomas, 1990; Porac *et al.*, 1995; Auty and Easton, 1990).

Regardless of the analytical approach employed, conceptually it is generally accepted that competitor identification requires the simultaneous consideration of both demand side and supply side attributes of putative competitors and their domain (Abell, 1980; Day, 1981; Porac and Thomas, 1990; Scherer and Ross, 1990; Chen, 1996). Demand side considerations ensure that products are substitutable in the eyes of consu-

mers. They include an analysis of the degree to which products fulfill similar functions and address similar needs. Supply side considerations address the degree to which firms are similar in term of technological and production capabilities.

In practice, however, commonly employed approaches to competitor identification display biases toward one side or another. For example, in industrial organization economics-based approaches, SIC codes (recently replaced by NAICS), have been employed often to delineate market boundaries, resulting in a supply side bias (Curran and Goodfellow, 1990). These codes are determined on the basis of technological as well as product commonalties, which are essentially supply side factors only. Recent experimental evidence suggests that cognitive views of markets, championed by Porac and Thomas (1990) as a basis for competitor identification, are subject to supply side biases as well (Clark and Montgomery, 1999).

The problem of bias in market definition is not a trivial one. Awareness is key to organizational action and is a principle driver of competitive attack and response (Chen, 1996). If the approach to market definition is too narrow in scope, then managers may be unaware of activity with competitive relevance and may find themselves blindsided by a surprise attack. Further, they may be unable to identify attractive market opportunities because a narrow view of the market blinds them to alternative venues in which their capabilities may be employed to advantage.

Consider, for example, the irony of the battle that took place in the 1970s between Polaroid and Kodak over the instant camera market (Porter, 1983). These two formidable rivals were drawn into a series of enormously costly price wars and legal battles with one another. While they were so engaged, their markets were being eroded by the arrival of 1-h photo shops, camcorders, and camera systems that did not require film. Their focus on one another as rivals may have prevented them from seeing the larger picture. And the opportunity cost of their private battle may have been the chance to prepare for the greater competitive challenge that lay on their horizon.

Few practical tools have been developed to assist managers with the task of identifying and analyzing competitors that span traditional product market boundaries. Other approaches to competitor identification are congruent with the task of market definition because they are con-

cerned with identifying only close competitors. This can be limiting, particularly in the contexts of rapid innovation and of cooperation among multimarket firms (Hruska, 1992). Our framework goes well beyond this, since one of its purposes is to maximize managerial awareness of competitive opportunities and threats. We define competitors far more broadly to include not only close competitors but more distant competitors in the form of less obvious substitutors and potential competitors as well. In this way, we answer the call of Smith *et al.* (1992) and Chen (1996) for a framework on competitive dynamics that includes potential competitors.

Moreover, in contrast to most other methods, our approach brings a clear consideration of customer needs into the analysis with respect to both demand and supply side issues.[2] As described in the next section, we provide a two-stage framework for competitor identification and analysis. In stage 1, we explore how Peteraf and Bergen's (2001) framework can be used to develop a hierarchy of competitor awareness that can be used to link competitor identification with competitor analysis. This approach addresses the potential supply side bias that often diminishes the effectiveness of other qualitative approaches (Curran and Goodfellow, 1990; Clark and Montgomery, 1999). In the second stage, we provide a framework for competitor analysis that evaluates and compares the competitors identified in stage 1 according to their capabilities for meeting customer needs. We argue that the theoretical content, the practical relevance, and the accessibility of our framework make it particularly valuable for practitioners as well as for educators and scholars.

A TWO-STAGE FRAMEWORK

We develop our model in two stages for the following reasons. Firstly, there are two separate tasks to be performed: competitor identification and competitor analysis. While managers should take a broad approach to competitor identification to avoid competitive blindspots, they may want to hone in on groups of identified competitors separately in performing competitive analysis. Secondly, these two tasks require two separate functions. Competitor identification is essentially a categorization task (Rosch, 1978) that involves

classifying firms on the basis of relevant similarities. In contrast, competitor analysis is an evaluative task that goes beyond mere classification to compare rivals on the basis of relevant dimensions.

Thus, in the first stage, we draw from Peteraf and Bergen (2001) to take a broad-based approach to competitor identification, classifying candidate competitors on the basis of similarities in terms of their resource endowments and the market needs served. We do so by asking the simple question of *whether* two firms serve the same customer need presently or have the ability to do so in the near future. The aim of this stage of analysis is to help managers to maximize their awareness of competitive threats and to classify the types of competition that they face so that we may develop a hierarchy of competitor awareness that may be linked to competitor analysis.

In the second stage, we take an evaluative approach and ask the question of *how well* two firms serve the same need or how their capabilities compare. We relate that to our framework for competitor identification to develop a hierarchy of competitor awareness. We also introduce the notion of *resource equivalence* to help managers assess the strengths and weaknesses of their competition in terms of comparative capabilities. This takes our framework into the realm of competitor analysis and allows us to develop a series of propositions regarding the likelihood of attack and response from different types of competitors.

Stage 1: Recognizing and Classifying the Competition

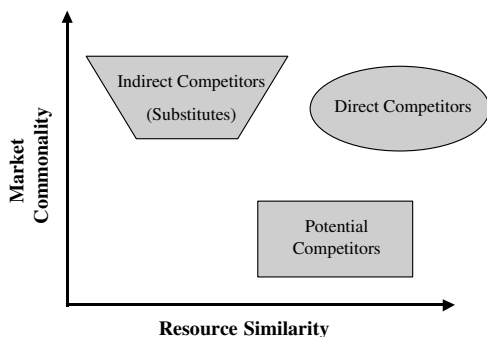To identify and classify the competitive set, we draw from Peteraf and Bergen (2001) to propose

the framework presented in Figure 1. [see Peteraf and Bergen (2001) for the original developments and a more detailed discussion of this framework for competitor identification.] We borrow from Chen's (1996) highly acclaimed paper, but adapt his constructs of market commonality and resource similarity to serve our different purposes. Specifically, under the category of market commonality, we sort competitors based on the degree to which they address similar customer needs, while under the category of resource similarity, we sort competitors based on the degree to which their resource endowment is similar in terms of type or composition.

Chen (1996, p.106) defines market commonality as 'the degree of presence that a competitor manifests in the markets it overlaps with the focal firm', a definition that serves as an indicator of a firm's 'direct or primary competitors' and their behavior (Chen, 1996 p.102). We broaden the definition to take the perspective that firms compete with one another to the extent that they satisfy the same customer needs. Accordingly, we redefine market commonalty as *the degree to which a given competitor overlaps with the focal firm in terms of customer needs served.* This approach is consistent with the marketing literature (Levitt, 1960; Cooper and Inoue, 1996) and recognizes that competitors may include firms that do not share the same technological platform. It is consistent as well with the type of approach to market or niche overlap utilized in the population ecology literature (McPherson, 1983; Baum and Singh, 1994; Baum and Korn, 1996).[3]

Notice how the incorporation of customer needs changes awareness through a change in the assessment of the competitive structure. For instance, in analyzing the airline industry, a customer-needs-based analysis would suggest that the fundamental enduring need is for convenient transportation. In short, haul airline markets, there are a number of viable alternatives for consumers, including rail, automobile, bus, and limousine services. Similarly, Southwest Airlines' entry into the Northeast corridor through Islip posed a significant competitive threat to Amtrak. Our needs-based definition encourages managers to look beyond restrictive product market boundaries to assess competitive threats more broadly. It captures the extent to which direct and indirect competitors, such as substitutors, are in competition to serve the same needs.

Figure 1. Mapping the competitive terrain.

Chen (1996, p.107) defines resource similarity as 'the extent to which a given competitor possesses strategic endowments comparable, in terms of both type and amount, to those of the focal firm'. We modify this definition slightly. Because we merely categorize firms by type of competitor in stage 1, reserving comparisons regarding relative competitive capabilities for stage 2 analysis, we do not consider resource amounts. We regard the amount of resources as one of the many dimensions on which a firm may claim resource superiority relative to other firms. For our purposes, we redefine resource similarity as *the extent to which a given competitor possesses strategic endowments comparable, in terms of type, to those of the focal firm.*

We utilize these two constructs of market commonality and resource similarity to categorize the competitive field from the point of view of a focal firm. Thus we employ dyadic comparisons between that firm and candidate rivals. By displaying resource equivalence as an increasing function on the *x*-axis and market commonality as an increasing function on the *y*-axis, we can map the competitive field of a focal firm by locating candidate rivals on the grid.

A firm that scores high in terms of both market commonality and resource similarity is one that serves the same market needs with the same types of resources as the focal firm. Firms such as these will be found in the northeast corner of the grid. These are the focal firm's *direct competitors*, as for example AMD is for Intel (both producers of microprocessors and suppliers to computer manufacturers).

Firms with resource endowments similar to the focal firm that do not presently serve the same customer needs will be found in the southeast corner of the grid. These are the set of *potential entrants* into the markets of the focal firm. For example, a caterer and a local restaurant may both compete on the basis of their reputations for good food and service, and similarly employ chefs, kitchen equipment, and the like. Although their resource similarity is high, they may nevertheless cater to demonstrably different customer needs. Corporate customers need caterers to prepare, deliver, and serve party foods and dinners for large functions held at the client's site; individuals patronize restaurants in small groups for a pleasurable dining experience away from home or for small-scale take-out service. While these two businesses presently serve different needs, either could choose to branch out and enter the others' market since they already have most of the resources required to do so.

Firms that occupy the southwest corner of the grid score low on both dimensions. They are entirely outside the competitive set at present, although this could change over time as firms change their positions. Of greater interest is the set of firms in the northwest corner. These firms are serving the same market needs as the focal firm but with different types of resources. They comprise the set of *indirect competitors*, such as substitutors.

Substitutors are an important, but often invisible, class of competitors since they frequently utilize new technologies, whose costs are likely to decline due to the learning curve. For example, cameras may be used to take pictures with film-based technologies that depend on capabilities in chemistry and mechanics. Alternatively, digital pictures may be produced using electronics capabilities. The underlying consumer need (to record events pictorially) is served equally well by completely different technologies, as a result of which Sony and Kodak now compete (Friedman, 1999).

While this mapping exercise is fairly straightforward, our customer needs perspective introduces an important subtlety into the analysis that managers might otherwise overlook. Consider again the set of direct competitors. When consumers acquire information about available alternatives to fulfill a need, they generate an 'awareness set' that is subsequently honed down to make the choice problem easier (Peter and Olson, 1993). This reduced set, known in the field of marketing as the 'consideration set', is the set of options from which the eventual choice generally emerges. To the extent that more than one alternative is actively considered in the consideration set, those alternatives are the most significant competitors. In other words, the direct competitors identified by the mapping exercise may not *all* be immediate competitive threats, because only a subset of them may be in consumers' consideration sets. This suggests that the needs perspective can be used both broadly and more narrowly to generate a deep understanding of the variations and ambiguities in the competitive landscape.

There is an important strategic implication of this line of thinking. Consideration sets do not

exist in a vacuum. In fact, firms frequently attempt to influence the composition of the consideration set through a multitude of devices including comparative advertising, sales presentations, and shelf placements. Industry leaders attempt to assure that they are the sole members of the consideration set, and therefore rarely engage in comparative advertising that identifies a competitor. Conversely, firms that have weaker market positions attempt to develop psychological associations with industry leaders through comparative ads that specifically identify the principal competitor. Such associations allow weak firms to inveigle their way into customers' consideration sets.

This framework, then, is useful not only for increasing awareness of the various dimensions of the competitive landscape, but it can assist managers with attempts to influence the composition of the landscape as well. It is useful for identifying opportunities for collaborative and cooperative activities, such as joint advertising to increase industry demand, in addition to identifying and monitoring threats. Additionally, there are other practical implications of this framework. It can be used to view competition dynamically and to track potential competitors' movements over time. It serves to remind managers to track not only rivals' conduct in product markets, but their activities in factor markets as well. Activity in the resource market may provide a forewarning of impending competitive action in the product market.

The limitation to this part of the framework is that while it is useful for surveying the competitive terrain and classifying competitors, it cannot be used to order the terrain and rank competitive threats and opportunities. That is to say, it cannot be used to ascertain which competitors present the strongest threat to a focal firm and which are the most vulnerable to competitive attack. For this, we need additional information. Specifically, we need to be able to evaluate the differences in resource type, in terms of their abilities to satisfy a given set of market needs.[4] Knowing that the capabilities of two players differ is useful for simple classification purposes. But in order to predict which is the stronger competitor, we need to know how their capabilities differ and which set is better suited to the market needs being served. We turn to these issues in the second stage of our analysis.

Stage 2: Evaluating the Competition and Predicting Rivalry

To facilitate evaluating the competition and making predictions regarding the likelihood of attack and response, we introduce the construct of resource equivalence. We define resource equivalence as *the extent to which a given competitor possesses strategic endowments capable of satisfying the same customer needs as the focal firm.* Although this is a continuous measure like the notion of resource similarity, we can conceive of it in terms of high and low degrees. If two firms have high resource equivalence, they come close to being equally capable of satisfying the same customer needs. Equal capability implies that they do or can address the same market needs equally well. For example, among supermarket chains, Kroger and Albertsons score high in terms of resource equivalence, and represent relatively balanced competitors nationwide, with approximately 1900 stores apiece in 1999.[5]

We utilize this construct to conduct competitor analysis by assessing the strength of various types of competitors relative to a focal firm, as we illustrate in Figure 2.

On the horizontal axis, we sort firms according to whether they have high-or low-resource equivalence relative to the focal firm. On the vertical axis, we sort firms according to the three basic competitive categories identified in the first stage of the analysis: direct competitors, potential competitors, and indirect competitors.

Note that there is relative balance in terms of competitive strength between the focal firm and its competitors on the right-hand side of matrix. For example, if the lower right-hand side of the matrix

	Low	High
Indirect Competitors	e.g. Peapod vs. Albertsons	e.g. Wal-Mart vs. Albertsons
Potential Competitors	e.g. Canadian Safeway vs. Albertsons	(e.g. none)
Direct Competitors	e.g. Lunds/Byerly's vs. Albertsons	e.g. Kroger vs. Albertsons
	Resource Equivalence	

Figure 2. A framework for competitor analysis.

contains Kroger (in relation to Albertsons), the upper right cell might contain Wal-Mart's Super-centers, which presently are only a third of the size of the traditional supermarket chains (with lower scale and scope economies), but have superior capabilities in terms of information technology and logistics (see Note 5). It is a balanced package such that their set of capabilities, taken as a whole at this point in time, can meet customer needs about as well as the capabilities of Albertsons. The middle cell on the right might contain the large Canadian chain, Loblaw, that presently serves other geographic needs but with similar and equivalent capabilities.

On the left-hand side of the matrix, there is imbalance with respect to capabilities, implying that one rival is stronger than the other. For example, a small chain such as Lunds/Byerly's with its 19 stores would occupy the lower left cell, while middle-sized Canada Safeway might occupy the middle cell, and a small but growing Internet provider, such as Peapod, may be found in the upper left cell (see Note 5). At present, none of these competitors is a match for the superior capabilities of Albertsons to meet customer needs, although that could change over time. Note, more generally, that whereas this matrix is indicative of competitive imbalance, it does not reveal the directionality of the imbalance. Individual competitors occupying the left-hand side could be stronger or weaker than the focal firm.

We capture the relationship between competitive balance and resource equivalence with the following premise:

Premise 1:
As resource equivalence increases between a focal firm and a rival, the degree of competitive balance increases as well, *Ceteris paribus*.

While balance is the indicator that increases from left to right on this diagram, it is awareness that increases as we move from the bottom to the top. The reason for this is simple. Direct competitors have the most in common with the focal firm, since there is similarity in terms of both customer needs met and resource type. (This of course holds the level of resource equivalence constant.) They are uppermost in the minds of managers because of the salience of these types of similarities. The work by Reger and Huff (1993), and Lant and Baum (1995), Porac and Baden-Fuller (1989) on how managers perceive

competitors provides empirical support for these claims.

Potential competitors have similar resources as the focal firm but serve different market needs. Indirect competitors represent the reverse situation. Because of the supply side bias that we discussed in the previous section, managers pay greater attention to firms with similar technologies and resources when scanning their competitive environment than they do to firms that are outside traditional product market boundaries. For these reasons, we suggest the following:

Premise 2:
The awareness between a focal firm and its rivals decreases, *Ceteris paribus*, as we move from the class of direct competitors, to potential competitors, to indirect competitors.

Our analysis of the degree of rivalry in various segments of the competitive domain depends on an assessment of the two factors of balance and awareness. An understanding of the level of awareness between competitors is essential since awareness is one of the three fundamental drivers of competitive behavior, which also include motivation and capability.[6] As Chen (1996) makes clear, organizational action depends critically upon these three drivers. An understanding of the degree of competitive balance is important because it affects both capability, which is a relative phenomenon, and motivation, which depends in part upon the probability of success. For example, when there is balance, then the capability of one party to dominate in a competitive battle is low relative to the situation when there is imbalance. In this situation, there is a tendency toward what is known in the literature on multi-market competition as 'mutual forbearance' (Gimeno and Woo, 1996,1999; Baum and Korn, 1996, 1999; McGrath *et al.*, 1998). Balance also affects the motivation of competitors in that motivation is affected, in part, by the likelihood of success. If the level of balance is high, for example, then the probability of successfully defeating one's rival is low relative to an imbalanced situation in which one holds the advantage.

We use these premises to derive a series of logical propositions regarding the likelihood of attack and response from various competitive quarters. The most general of these follow from the effect of balance on rivalry. Balance inhibits the initiation of competitive action, since

competitors have more to gain from forbearance than from competitive engagement. That is, the initiator's probability of success is lower and its probability of defeat is higher in a balanced situation. In addition, balance often encourages cooperative actions that may provide a win–win solution for the parties involved (Brandenburger and Nalebuff, 1996). When there is imbalance in terms of capabilities, advantaged rivals are motivated to capitalize on their situation, striking from strength against weakness, or using a judo strategy to turn an opponent's strength into a liability (Gelman and Salop, 1983; Yoffee and Cusumano, 1999). In summary, when the level of balance is high, the level of motivation for competitive attack is low. Because of the corresponding relationship between balance and resource equivalence, we propose the following:

Proposition 1:
As the resource equivalence between two firms increases, the likelihood of attack is reduced, *Ceteris paribus.*

Because there is greater balance on the right-hand side of the figure, the likelihood of response to attack is also greater on the right-hand side. The reason for this is that the capability of effective response is much higher when resource equivalence is high and the motivation is higher as well due to the higher probability of success. This, of course, assumes that other things that affect motivation, such as the gains from engaging in competitive action, are equal across conditions. Notice, parenthetically, that this high likelihood of a response to an attack is one of the things that motivate forbearance from attack in the first place. This reasoning leads us to our next proposition:

Proposition 2:
As the resource equivalence between two firms increases, the likelihood of response to a competitive attack increases, *Ceteris paribus.*

This proposition reinforces our third proposition, that rivalry is reduced among resource equivalent competitors. The reason for this argument is that firms will be even less likely to upset the competitive balance and attack if they know that their equally capable rival is likely to respond. They are better off accepting an uneasy truce than risking a costly and damaging competitive battle.

Along the two sides of the matrix, the properties of awareness and balance interact in interesting ways to yield further predictions regarding the likelihood of attack and response. Note first that although the likelihood of attack is generally lowest on the right-hand side of the diagram, it increases as we move from the bottom to the top cell. The reason for this is that as awareness of rivals decreases, the awareness of the balance decreases as well. Notice that it is more difficult to perceive resource equivalence when the capabilities differ by type and by composition, as in the Wal-Mart versus Albertsons example that we have already given. Thus, balance is less of a limiting factor in the uppermost cells on rivalry and opportunities for mutual understanding diminish due to the greater heterogeneity. Moreover, an aware rival may take advantage of the fact that on average, his competitive target is likely to be relatively unaware of competitive actions coming from an indirect competitor. This increases the probability of a successful assault and thus the motivation for action. In sum, we propose:

Proposition 3:
When the degree of resource equivalence is high, the likelihood of attack increases as we move from the class of direct competitors, to potential competitors, to indirect competitors.

The likelihood of response runs in the opposite order on the left-hand side. That is, balanced direct competitors are the most likely to respond to an attack, while indirect competitors are the least likely to respond. When there is balance in terms of resource equivalence, the capability for effective response is high. Because the motivation for action is dependent on an assessment of the likelihood of success, the motivation for response is high as well, other things equal (such as what is at stake). Even though there may be equivalent capabilities among indirect competitors, they are less likely to be perceived as equivalent. Moreover, rivals are likely to be less aware that indirect competitors are indeed competitors, and this reduced awareness should be accompanied by a reduction in responsiveness.

Proposition 4:
When the degree of resource equivalence is high, the likelihood of response decreases as we move

from the class of direct competitors, to potential competitors, to indirect competitors.

The action and response expectations on the left-hand side of the matrix are just the reverse of those on the right. Thus, the likelihood of attack is greatest when imbalanced rivals compete directly and lowest when imbalanced rivals compete indirectly. The reason for this is that the awareness of a rivalrous opportunity will be greater among direct competitors than among potential competitors or indirect competitors. The propensity of managers to view rivals in terms of similar products along traditional market boundary lines means that they will choose opportunities to compete first in those venues. In addition, they may feel that they know better how to compete effectively within traditional market boundaries than across them. By remaining within these boundaries, they can utilize available organizational routines for competing locally and have a repository of knowledge regarding likely reactions and outcomes that are most applicable for such actions (Nelson and Winter, 1982). In sum:

Proposition 5:
When the degree of resource equivalence is low, the likelihood of attack decreases as we move from the class of direct competitors, to potential competitors, to indirect competitors.

Here the outcome is opposite for the likelihood of response. To understand this, one must first appreciate that when there is imbalance among rivals, the likelihood of effective response is small. This reduces the likelihood of response since both capability and motivation will be low, other things equal. What drives a lower response rate among indirect competitors relative to direct competitors on this side of the matrix is the lower awareness of the imbalance and its implications. That is, while indirect competitors are unlikely to see each other as rivals *a priori*, when attacked they are more likely to respond simply because the perception of imbalance is lower. They are more likely to believe that they have a chance of effective response, Ceteris paribus. This leads to the following prediction:

Proposition 6:
When the degree of resource equivalence is low, the likelihood of response increases as we move

from the class of direct competitors, to potential competitors, to indirect competitors.

We now turn to a discussion of the uses of our framework and its limitations in the section below.

DISCUSSION

Implications

Our frameworks can be helpful to strategists in a variety of ways. First, the stage 1 framework can be used in isolation as an aid to overcoming a natural tendency toward over weighting supply side factors in surveying the competitive environment and ignoring competition from beyond traditional product market boundaries. Second, it can be used to chart the movement of competitors to new positions along the grid. Thus, it can provide a more dynamic outlook of how the competitive situation is changing. Third, it can be used to look for new opportunities for competitive dominance. It can also be used to search for cooperative opportunities. Fourth, it can be used to design a strategy to influence customer needs, as well as their awareness sets and considerations sets. Thus, it can be used to change the competitive landscape on a variety of dimensions.

Stage 2 of the analysis has significant implications for managers as well. Not only do we believe that our propositions have predictive power regarding the likelihood of attack and response, but in addition, they can be used to order the competitive field in terms of threats and opportunities. For example, on the right-hand side of the matrix, it is clear that the degree of competitive threat increases from bottom to top if we view the competitive field dynamically. That is, over time the indirect competitors among those competitors with equivalent resources pose the greatest threats to a focal firm. This is consistent with Chen's prediction that the greatest competitive threat comes from rivals with low market commonality and high resource similarity. Applying this to our stage 1 framework suggests that potential competitors (with low market commonality and high resource similarity) may ultimately be more threatening than direct competitors (with high market commonality and high resource similarity), which accords with our predictions.

Because stage 2 matrix indicates competitive imbalance, but does not show whether it is the rival or the focal firm that benefits from the imbalance, the left-hand side of the matrix reveals information about both opportunities and threats. If the focal firm is the holder of resources that are less capable of meeting market needs than its rival, then its greatest threat (over time) will be found among its direct competitors, since the propensity for attack is strongest and the propensity for response is weakest. If the focal firm is the advantaged party, then this cell presents its greatest opportunities for successful competitive engagement. More generally, the matrix reveals opportunities for cooperation, along the right-hand side and suggests that a firm seek competitive opportunities and threats along the left-hand side. Note that if the focal firm is less capable of meeting market needs than stronger rivals, its greatest competitive threat will come from the direct competitors in the lower left cell. These will comprise the competitive set that pose the most danger since the focal firm will be least able to respond effectively.[7] Further, it is in this cell that there is the least opportunity for cooperation. Cooperative opportunities are greatest on the right-hand side of the matrix. In addition, it is possible that relative capability among rivals is even more important in predicting rivalrous interactions than the awareness factor. While it may not be a more significant determinant in its own right, its effect is magnified since it affects motivation as well through its effect on the likelihood of success.

There are other managerial implications as well. Since the competitive threat is relatively high from indirect competitors with resource equivalence, managers should actively seek opportunities to find stable win–win solutions. An example of this is the recent set of agreements reached between Microsoft and Apple. Since the primary driver of increased likelihood of attack on this side of the matrix is reduced awareness of the competitive balance, managers should actively seek to educate their rivals regarding their resource equivalence. They should also seek to signal both their capability of an effective response to any attack and their willingness to respond in order to diminish further the probability of attack from all types of resource equivalent competitors.

When resources are not equivalent and the focal firm is in the superior position, managers should take steps to enhance awareness of their presence, so that rivals will recognize the futility of their position and refrain from response. If the focal firm is in the weaker position, its managers should seek to diminish awareness of this imbalance, so as not to invite an attack, or try to commit credibly to staying weak. They might also consider signaling that they believe that their capabilities are stronger than they are or that they will respond irrationally to an attack, in order to diminish attack probabilities. Finally, just as managers can use the stage 1 competitive terrain map to track competitive movements, so can they use stage 2 matrix to chart changes in resource equivalence and corresponding capabilities. They can use this information to prepare defenses against competitive incursions and to strengthen their position vis-a-vis rivals. For example, grocery chains such as Albertsons and Kroger have begun to consolidate to improve their capability to meet market needs efficiently as they have noticed Wal-Mart gaining strength with their hypermarkets and supercenters.

Limitations

One limitation of our model is that, in contrast to Chen's (1996) model, it does not account for the relative importance of various market segments to the industry participants. Thus some market segments may be of greater strategic value to firms than others and may be worth fighting for more than others. This affects rivalry through its effect on motivation. We have assumed this effect to be constant throughout our analysis. Managers should be aware of this limitation and should factor in the relative importance of various market segments to their own firms and to rivals in making judgments regarding likely competitive reactions. In addition, managers should consider the growth rate of various market segments, since that will define the attractiveness of the turf under contention and will affect the level of rivalry (Porter, 1980).

Another limitation is that the model does not take into account the notion that some resources represent more potent competitive weapons than others and may also make rivals more immune to competitive attack. Our model addresses the questions of which firms are alike and which are superior, but not which are assailable. To an extent, these factors are built into our assumptions regarding the meaning of resource equivalence, but

the underlying micro-level analysis is beyond the scope of this paper. By incorporating additional information regarding what drives competitive advantage from models such as the resource based view of the firm (Barney, 1991; Amit and Schoemaker, 1993; Peteraf, 1993), it is conceivable that the power of this model could be increased. This may be a fruitful avenue for future research.

The model is limited as well, in that it ignores the competition that can come from suppliers and customers, as Porter's (1980) five-forces model suggests. Neither does it take into account other forms of competition within a firm's 'value net' (Brandenburger and Nalebuff, 1996). Moreover, while the model has the capability to consider the role of complementors, we do not explicitly discuss this issue. Since complementors play a cooperative role more often than a competitive role, including them in stage 2 analysis may be misleading.

In addition, while the model can be used to an extent to track competitive movement, it lacks the richness of a truly dynamic model. It ignores factors of timing, such as the length of response delay, subsuming these issues instead into the 'likelihood' of response. Additional insight from the model might be possible if one built some consideration of the relative adjustment costs that various rivals face in altering their capability sets. See, for example, the Dierickx and Cools' (1989) discussion of capabilities and time compression diseconomies. See also the Grimm and Smith's (1997) discussion of response delays and other timing issues.

Finally, it is possible that the model's predictive power could be increased if it accommodated in explicit fashion an understanding of how the capabilities of rivals create value in terms of increasing perceived customer benefits and lowering costs. By delving more deeply into these aspects, one could predict even more cleanly where a firm's best opportunities and greatest threats lie. We reserve these possibilities for future work.

CONCLUDING REMARKS

This paper makes its contribution to scholarship on four broad fronts. First, we extend the competitive dynamics literature to include the task of competitor identification. We do so in a way that is consistent with and complementary to the thinking in this research stream, facilitating seamless integration across the analytic tasks and contributing to a more complete overall model of competitive dynamics. Second, we focus attention on the role of the customer in defining competitors and show how a greater consideration of customer needs can expand managerial awareness of what lurks on the competitive horizon. Third, we introduce the notion of resource equivalence as a tool for evaluating competitors. This is a powerful construct that directs attention to competitive dimensions that matter at a fundamental level. Fourth, we use our hierarchy of competitor awareness and resource equivalence to generate hypotheses on competitive analysis.

The paper's contributions are not limited, however, to the world of academia. The frameworks and propositions in this paper also have strong implications for managers and for strategists. The paper provides a set of tools for scanning the competitive horizon that can help managers to lessen the probability of their being blindsided by a competitive attack. These tools can help managers take a more dynamic view of competition and think more strategically about competitive challenges that lie ahead. With a greater appreciation of the competitive dynamics of the broad environment in which they operate, they may become more proactive in responding to these challenges. They can also help managers to anticipate new opportunities that others might not see so readily, thus enabling them to move more quickly and take advantage of them as they arise. Finally, the tools for competitor analysis provided in this paper can also help managers to gain a deeper appreciation of what drives attack and response behavior. This will enable them to anticipate their rival's moves more accurately and to respond more rationally. As managers learn to navigate their competitive terrain with greater competency, they should see improvements in both the competitive position and performance of their firms, relative to more shortsighted rivals.

NOTES

1. See Besanko, Dranove, and Shanley (1996) for a description of these techniques.
2. Chen (1996) also provides a model of competitor analysis that accommodates a broad approach to the market. Our framework is differentiated from his in that it addresses explicitly the task of competitor identification (while his takes the market boundaries as given). In addition, it incorporates attending to customer needs as a basis for both identifying markets and comparing capabilities.
3. The organizational niche overlap concept is in turn related to the concept of domain similarity in the literature on interorganizational relationships. It refers to the extent to which firms obtain revenues from the same sources, have similar skill bases, and provide similar products and services (Baum and Singh, 1994).
4. More specifically, we are concerned with relative abilities to create value in a specific context.
5. From data compiled by the Retail Food Industry Center of the University of Minnesota.
6. These drivers are drawn from the literature on change, learning, and decision-making. See, for example, Schelling (1960), Allison (1971), Kiesler and Sproull (1982), Dutton and Jackson (1987), Lant, Milliken, and Batra (1992).
7. This is true in a static sense as well as a dynamic sense, since focal firms of this sort are not likely to last long unless their capabilities improve.

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