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EDITORIAL ESSAYS

Competitive advantage in alliance constellations

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What determines the success of a firm competing as part of an alliance constellation? Is it the strategy and structure of the constellation? Or the capabilities of the firm and its partners? Or the actions of rival constellations? Or perhaps the actions of the firm's own partners? The answer is: all of the above. But that is not a satisfying answer. It leaves us without a framework for analysis and management.

In search of a framework, we might turn to traditional models of strategy and organization. But there we find mostly models predicated on the firm as the unit of competition; the notion of a firm competing within and as part of a larger constellation is rarely addressed (Ghemawat et al., 1999; Saloner et al., 2001). Yet this kind of competition is becoming increasingly important, as alliances have spread in many businesses. The competitive game in these businesses is often transformed from firm versus firm to group versus group. Recent examples of this pattern can be found in airlines, automobiles, telecommunications, and computers (Nohria and Garcia-Pont, 1991; Gomes-Casseres, 1996; Suen, 2002).

When this happens, what determines the total profits of an alliance constellation? And given those profits, what determines the share that any member of the group can appropriate? Any theory of competitive advantage in constellations must address these questions. Luckily, the elements of such a theory are emerging, as I will show below. Even so, we do not yet have an explicit, comprehensive framework to tie together these pieces. The two most important elements, in my view, are: first, the nature of the group-based advantages that shape constellation success; and second, the forces that determine the claim of a firm on its group. Together these elements determine the competitive advantage of a firm in a constellation.

This essay intends to spark debate on these issues; *SO!* is an ideal place to do so. The questions I ask do not fall neatly in the field of strategy nor in that of organization: they require the integration of perspectives from both fields. An alliance constellation is a particular kind of organization created to pursue a particular kind of strategy; the results thus depend on the design of both aspects and on the interaction between them. In this context, and probably in many others, it is limiting to think about strategy without thinking about organization, and the reverse. In the spirit of *Strategic Organization*, I shall

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borrow freely from both fields and mix and match concepts in perhaps unortho-
dox ways.

From firms to constellations

Students of strategy and organization have long focused on the firm as their main unit of
analysis. Even so, Edith Penrose recognized early on that relying on the traditional defi-
nition of the firm might be problematic:

> For an analysis of economic power there is no doubt that the industrial firm is not
> the most relevant unit; indeed individual men as well as corporations may extend
> their economic power by extending their ownership interests, and an attempt to
> define the firm according to power groupings would produce too amorphous a con-
> cept to handle. (1995: 22)

We must use modern theory and data to pursue the challenge posed by Penrose. Indeed,
in a new foreword to the third edition of her book, Penrose discussed the 'metamorpho-
sis' of firms into groups and up until her death she was intrigued by the possibility of
extending her analysis into this field.

To avoid confusion, two definitions are in order. An alliance is any governance
structure to manage an incomplete contract between separate firms and in which each
partner has limited control. These structures may be more or less formal; it is the degree
of incompleteness that determines whether we are dealing with an alliance, not whether
or not there is a stand-alone structure to govern the relationship. In fact, alliances may
be structured as complex equity joint ventures or they may be looser arrangements for
cooperating in R&D or marketing or for managing supply and sales relationships. A
constellation is a set of firms linked together through such alliances and that competes
in a particular competitive domain; the constellation may compete against other con-
stellations, or against single firms (Gomes-Casseres, 1996). My definition of alliance is
akin to that in a new line of work by Baker et al. (2002), which stresses the relational
nature of the contracts between the firms. My definition of a constellation, sometimes
also referred to as an alliance group (Gomes-Casseres, 1994), is like that in Jones et al.
(1998), related to strategic blocks (Nohria and Garcia-Pont, 1992), strategic networks
(Jarillo, 1988), and webs (Hagel, 1996); for a review, see Gulati (1998). My definition
of constellation is more restrictive than these related concepts, and is closer to those of
Lorenzoni and Ornati (1988) and Normann and Ramírez (1993).

A constellation is an alternative to the single firm as a way of governing a bundle of
capabilities (Powell, 1990). As a result, one might see single firms competing against
constellations. This simply means that the single firm has more required capabilities in-
house than do the members of the constellations. The underlying theme of this essay is
that the design of a constellation affects how it competes and that the position of a firm
among and within constellations influences the gains made by the firm. A few papers
have attempted to measure the performance of various kinds of groups compared with
firms (Hacki and Lighton, 2001; Khanna and Rivkin, 2001), but we do not have a
coherent framework to analyze either between-group or within-group performance.

From traditional competition to collective competition

Our models of traditional competition, in which firms compete against other firms, are good starting points for understanding collective competition, in which constellations of allied firms are the competitive units. But the traditional models need to be amended and expanded. The organizational form of the competitive unit affects how it competes and how value is distributed among its constituent parts. This is true for companies, and even more so for alliance constellations.

We know that collective competition exists in many domains and we have a fair understanding of what motivates firms to create constellations. To be sure, constellations do not necessarily confer advantage to a firm and I do not presume that here. Depending on the context, they can be helpful or not, just like with vertical integration. The firms in Chandler (1990) gained advantage from vertical integration; that strategy would be deadly for Dell today. The advantages of a constellation, as compared with a single firm, depend on the need for integration among parts of the value chain and the need for scale and specialization in each of the parts (Chesbrough and Teece, 1996; Gomes-Casseres, 1996). Space limits preclude me from delving further into the costs and benefits of constellations in this essay.

I take as a starting point that constellations have appeared in a competitive domain; what we need then is a way to think about competition in this context (Silverman and Baum, 2002). Table 1 shows how to translate the concepts of the traditional competition model to that of collective competition.

Some concepts from traditional competition have clear analogs in collective competition. In the traditional model, firms are competitive units in an oligopolistic industry. In collective competition, the competitive units are constellations, and industry structure can be conceived of as an oligopoly of constellations (Nohria and Garcia-Pont, 1992; Gomes-Casseres, 1996; Suen, 2002). In the traditional oligopoly, firms rely on firm-based advantages for differentiation. In collective competition, constellations rely on group-based advantages to differentiate themselves from rivals. The resource-based view helps us think about both firm- and group-based advantages. In the traditional model, firms control resources through ownership and govern them through their corporate structures. A constellation assembles the resources of its members and governs these resources by the way the group is structured and managed.[1]

The last element of this 'big-picture' comparison of traditional competition and collective competition is the origin of a firm's profit. Simplifying again, the traditional

Table 1 Features of traditional competition and of collective competition

	Traditional competition	Collective competition
Competitive units	Firms	Constellations
Industry structure	Oligopoly of firms	Oligopoly of constellations
Source of differentiation	Firm-based advantage	Group-based advantage
Valuable resources	Controlled by the firm	Assembled by constellation
Governance of resources	Corporate structure	Constellation structure
Source of profit	Rent in the value chain	Rent in the constellation

model reasons that firms appropriate a share of the rent in the value chain in which they are operating (Gadiesh and Gilbert, 1998). That pool of rent in the chain is influenced by industry-wide pressures, such as those in Michael Porter's five-forces model. The firm gains a piece of this pool by exploiting its valuable resources or, in game-theory language, by bargaining for a share of the value-added that they bring to the pool (Brandenberger and Nalebuff, 1996).

In collective competition the constellation becomes both a player and a mediator in the bargaining process. Given a pool of rent available in an industry segment, rivalry among constellations determines the rent that each group appropriates from the pool, and then bargaining among the firms in each constellation determines the share of the constellation's rent that each firm can appropriate for itself. This argument is analogous, and in some contexts the same, as the analysis of the standards battle in Shapiro and Varian (1999).

In sum, the model of collective competition proposed here is one of resources, control mechanisms, and bargaining power nested in at least two layers.[2] Firms control firm-level resources that are aggregated to make group-level resources. These aggregate resources then determine the share of industry value that a group can appropriate. This group-based rent in turn forms the total from which member firms appropriate profits. This argument begs the question of what determines total group profits and what determines each firm's claim on the profits of its group. Again, traditional models of competition do not address these questions, but any theory of collective competition must. Below I rough out a preliminary answer to the question of how competitive advantage is created by constellations.

The nature of group-based advantage[3]

The group-based advantage of a constellation differentiates it from rival constellations and determines the share of the industry profits that it can earn. Analogous to the traditional model based on firms, group-based advantage stems from the relative value of the resources controlled by the constellation.

Let us focus on the two elements in this statement: first, the nature of the resources in each constellation; and second, how the constellation controls these resources. Because constellations are groups of allied firms, the resources in the constellation are the sum of the resources contributed to the group by member firms. But these resources are not controlled as tightly as they would be inside a firm, because of the incomplete contracts (and possibly partial ownership) in the alliances that tie the member firms together. Just like in a single alliance, therefore, the potential of a constellation to create joint value is realized only by how well the constellation is structured and managed. Research and anecdotal evidence suggests that group-based advantage is affected by the factors shown in Table 2.

The table shows an illustrative set of resources ('Resources assembled'), the value of which clearly depends on the nature of the competitive domain. In global telecommunications, all four factors seemed important. In global airlines, market reach and scale are more important than the others. In today's multimedia constellations, as in the RISC and PDA constellations of a few years ago (Gomes-Casseres, 1996), the last factor was

Table 2 Some factors shaping group-based advantages

Resources assembled: how valuable in the domain?

Total scale of operations
Technological capabilities
Market reach
Presence in key value chain segments

Organizational structure: how effective are the resources combined?

Unifying vision
Limited internal rivalry
Leadership at the core – one or a few firms
Limited membership, or norms and rules for similar members

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critical. This listing is not exhaustive; but the point is that a constellation can potentially gain group advantage only to the extent that it assembles those resources that are critical for success in its domain. Even when it does so, however, it is not assured of success, because the resources need to be deployed and integrated effectively.

The second set of four factors in the table ('Organizational structure') is an illustrative list that emerged inductively from my work in various industries (see cases of Coca-Cola, Visa, and Colliers in Bamford et al., 2003; and Mips Computer Systems and PDA constellations in Gomes-Casseres, 1996). They are consistent with theory. A unifying vision is important to bring together disparate partners. A corollary of this is that competition among members erodes the cohesion of the constellation (Hwang and Burgers, 1997). Leadership is important in making collective decisions and in disciplining constellation members that stray from the collective goals; constellations that are weak at the center tend to be pulled in multiple directions by their members, as happened with Mips (Lorenzoni and Baden-Fuller, 1995). Group size is a self-evident factor: the larger the group, the harder it is to manage, all else being equal. Those constellations that have grown large and successful (e.g. Coca-Cola and Visa) managed their size by issuing norms and rules that make management of the group more of a routine (as in franchising; Bradach, 1998). Again, this list is not exhaustive, but the point should be clear: a constellation only gains advantage from member resources if it is able to combine and govern them effectively.

This first cut at a theory of group-based advantage raises many research questions. First, what is the relative importance of assembled resources and organizational structure? As a constellation grows, it often faces a trade-off between the added resources from new members and the added management burden. Second, when compared with a single firm, is the organizational structure of the constellation in itself an advantage or disadvantage? In many domains, the tight control that a firm can exercise over its resources is an advantage; but in others, the looser arrangements in a constellation may offer gains from flexibility. Third, how is group-based advantage affected when members participate in more than one constellation? When membership is not exclusive, constellation boundaries overlap and resources from one can benefit a competing unit. Fourth, what organizational approaches are helpful in managing a constellation's resources? No doubt the management of these loosely controlled resources is subject

to special techniques, perhaps analogous to techniques that have proven useful in managing resources inside a firm.

Forces shaping a firm's claim on group advantage[4]

Although constellations are created to generate group-based advantages, they must yield value at the level of the firm in order to attract and retain members. The game of competition may have changed, but we still keep score the old way. What determines the value that a firm can actually appropriate from participation in a constellation?

Two strands of work on alliances and networks are relevant to this question. Authors taking a structural approach have argued that the position of the firm in a network shapes its power over partners (Nohria and Garcia-Pont, 1992; Burt, 1992; Lorenzoni and Baden-Fuller, 1995). Others have emphasized that the scarce resources added by each firm shapes its ability to extract profit from partners (Pfeffer and Salancik, 1978; Brandenberger and Nalebuff, 1996; Ghemawat et al., 1999). These different approaches are related to the debate in social network analysis between the roles of structural position and identity (Nohria and Eccles, 1992).

As with many such debates, it is likely that both perspectives are important; a recent attempt to combine the two sets of ideas is Suen (2002). In addition, the two sets of factors are often interdependent. A firm with unique and high value-added can often bargain for a central position in a constellation. A synthesis of these approaches might lead to factors such as in Table 3.

The evolution of the IBM PC illustrates how some of these factors work. The IBM PC was launched in 1981 by a constellation created by IBM, with Intel supplying the microprocessor and Microsoft the operating system. As a group, this triad created the microcomputer format that within a few years drove both the Apple II and the previously dominant CPM operating system to the periphery of the market. Later, this IBM PC constellation slowly fell apart, but Microsoft and Intel went on to develop the powerful Wintel alliance. The main lesson for the purposes of this essay is that although this constellation created tremendous group-based advantages (it established the dominant industry standard), the firms within the constellation benefited to different degrees. IBM, it turned out, ended up with the least claim on the joint value, even though it initiated the constellation, held a central position, and was much larger than its partners.

Table 3 Some factors shaping a firm's claim on value created by its constellation

Value-Added Perspective: What is the bargaining power of the firm within the group?
The firm controls scarce, valued, and well-protected assets
Competition among the firm's suppliers of complements
Lack of competition between the firm and its partners

Structural Perspective: What is the position of the firm within the network of allies?
Centrality of the firm's position
The firm occupies structural holes
The firm participates in multiple constellations

The key reason for this outcome lies in the nature of the resources each party contributed to the joint enterprise. In IBM's case, its resources were marketing, manufacturing, and the architecture of the product. To IBM's surprise, Compaq and a slew of IBM-clone makers were able to imitate the architecture and then out-manufacture and out-market IBM. Intel's and Microsoft's resources, however, were protected by copyright and by the firms' efforts to block imitation and stay ahead of clones. As a generalization, the better a scarce, valuable resource contributed by a partner is protected by formal legal means, the greater will be the ability of that partner to exact value from the constellation. Intel and Microsoft also benefited from competition among systems vendors, i.e. among their suppliers of complements. IBM had no such luck.

This example and the factors in Table 3 suggest some questions for future research. First, what are the relative roles of the value-added and structural explanations? Firms in standards battles often find themselves at the center of a network of licensees, but may have to yield bargaining power to get there. Second, how does bargaining among members of a constellation affect the overall governance of the organization? The group advantages discussed above may well be influenced by the internal dynamics discussed here. Third, how are entries and exits from a constellation affected by the distribution of benefits within the group? Presumably, firms weigh their private costs and benefits in these moves, but they may also be influenced by their benefits relative to other members.

Conclusion

This essay aims to spark a discussion with a preliminary sketch, not settle a question. I argue that we need a new framework to guide strategy and organizational design in a world of collective competition. This framework must explain the sources of group-based advantages, which in turn shape the overall performance of a constellation. It must also explain how forces internal to the constellation shape what a member firm can appropriate from the group.

Such a framework might also be useful in understanding strategic organization more broadly, for in many ways a constellation is like a complex firm with multiple internal constituencies. There too, organizational design and strategy are inextricably bound. Strategic analysis would benefit from a framework that takes account of differences in the organizational character of competing units, whether they be constellations or firms, in addition to the usual issues of industry context and scarce resources. Organizational analysts would benefit from an approach that ascribes competitive value to some of the structural choices that firms make. In this way, we might get closer to the broader definition of economic power, which, when our field was in its infancy, Penrose found 'too amorphous a concept to handle'.

Notes

This essay benefited from discussion at conferences at INSEAD and IESE, and from comments from the editors.

1   This is different from in Dyer and Singh (1998), where the capability to manage alliances itself is considered a valuable resource. I do not deny that, but focus here instead on how alliances extend the conventional resources available to the firm.

2   One could generalize this model to add layers. On one end, one can include units and individuals inside the firm, thus adding layers of resource control and bargaining within the firm. At the other end, layers can be added by considering the wider game (or industry) in which the game among the rival constellations is nested (i.e. the industry segment). For an intra-firm model not inconsistent with the approach in this paper, see Rajan and Zingales (2001).

3   For the sake of consistency, one could use the term 'constellation-based advantage', but I find it unwieldy.

4   Again, for consistency, this can be 'appropriation of constellation-based advantages', another unwieldy term.

References

Baker, George, Gibbons, Robert and Murphy, Kevin J. (2002) 'Relational Contracts and the Theory of the Firm', *Quarterly Journal of Economics* 117(1): 39–48.

Bamford, James, Gomes-Casseres, Benjamin and Robinson, Michael (2003) *Mastering Alliance Strategy: A Comprehensive Guide to Design, Management, and Organization*. San Francisco, CA: Jossey-Bass/Wiley.

Bradach, Jeffrey L. (1998) *Franchise Organizations.* Boston, MA: Harvard Business School Press.

Brandenburger, Adam M. and Nalebuff, Barry J. (1996) *Co-opetition*. New York: Currency/Doubleday.

Burt, Ronald S. (1992) *Structural Holes: The Social Structure of Competition.* Cambridge, MA: Harvard University Press.

Chandler, Alfred D., Jr (1990) *Scale and Scope: The Dynamics of Industrial Capitalism.* Cambridge, MA: Harvard University Press.

Chesbrough, Henry W. and Teece, David J. (1996) 'When is Virtual Virtuous: Organizing for Innovation', *Harvard Business Review* (Jan.–Feb.): 66–73.

Dyer, Jeffrey H. and Singh, Harbir (1998) 'The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage', *Academy of Management Review* 23 (Oct.): 660–79.

Gadiesh, Orit and Gilbert, James L. (1998) 'How to Map Your Industry's Profit Pool', *Harvard Business Review* (May–Jun.): 149–62.

Ghemawat, Pankaj, with Collis, David J., Pisano, Gary P. and Rivkin, Jan W. (1999) *Strategy and the Business Landscape: Text and Cases*. Reading, MA: Addison-Wesley.

Gomes-Casseres, Benjamin (1994) 'Group Versus Group: How Alliance Networks Compete', *Harvard Business Review* (Jul.–Aug.): 62–74.

Gomes-Casseres, Benjamin (1996) *The Alliance Revolution: The New Shape of Business Rivalry.* Cambridge, MA: Harvard University Press.

Gulati, Ranjay (1998) 'Alliances and Networks', *Strategic Management Journal* 19: 293–317.

Hacki, Remo and Lighton, Julian (2001) 'The Future of the Networked Company', *McKinsey Quarterly* 3: 26–39.

Hagel, John, III (1996) 'Spider Versus Spider', *McKinsey Quarterly* 1.

Hwang, Peter and Burgers, Willem P. (1997) 'The Many Faces of Multi-Firm Alliances: Lessons for Managers', *California Management Review* 39 (spring): 101–17.

Jarillo, J. Carlos (1988) 'On Strategic Networks', *Strategic Management Journal* 9(1): 31–41.

Jones, C., Hesterly, W.S., Fladmoe-Lindquist, K. and Borgatti, S.P. (1998) 'Constellations in Professional Services: How Firm Capabilities Influence Collaborative Stability and Change', *Organization Science* 9: 396–410.

Khanna, Tarun and Rivkin, Jan W. (2001) 'Estimating the Performance Effects of Business Groups in Emerging Markets', *Strategic Management Journal* 22: 45–74.

Lorenzoni, Gianni and Baden-Fuller, Charles (1995) 'Creating a Strategic Center to Manage a Web of Alliances', *California Management Review* 37 (spring): 146–63.

Lorenzoni, Gianni and Ornati, Oscar A. (1988) 'Constellations of Firms and New Ventures', *Journal of Business Venturing* 3: 41–57.

Nohria, Nitin and Eccles, Robert G. (1992) *Networks and Organizations: Structure, Form, and Action.* Boston, MA: HBS Press.

Nohria, Nitin and Garcia-Pont, Carlos (1991) 'Global Strategic Linkages and Industry Structure', *Strategic Management Journal* 12 (summer): 105–24.

Normann, Richard and Ramírez, Rafael (1993) 'From Value Chain to Value Constellation: Designing Interactive Strategy', *Harvard Business Review* (Jul.–Aug.): 65–77.

Penrose, Edith T. (1995) *Theory of the Growth of the Firm,* 3rd edn. New York: Oxford University Press (first published 1959).

Pfeffer, Jeffrey and Salancik, Gerald R. (1978) *The External Control of Organizations: A Resource Dependence Perspective.* New York: Harper and Row.

Powell, Walter (1990) 'Neither Market nor Hierarchy: Network Forms of Organization', *Annual Review of Sociology* 24: 57–76.

Rajan, Raghuram G. and Zingales, Luigi (2001) 'The Firm as a Dedicated Hierarchy: A Theory of the Origins and Growth of Firms', *Quarterly Journal of Economics* (Aug.): 805–51.

Saloner, Garth, Shepard, Andrea and Polodny, Joel (2001) *Strategic Management.* New York: Wiley.

Shapiro, Carl and Varian, Hal R. (1999) *Information Rules: A Strategic Guide to the Network Economy.* Boston, MA: Harvard Business School Press.

Silverman, Brian S. and Baum, Joel A.C. (2002) 'Alliance-Based Competitive Dynamics', *Academy of Management Journal* 45(4): 791–806.

Suen, Wilma (2002) 'Firm Power and Interdependence in International Strategic Alliances'. PhD thesis, Fletcher School of Law and Diplomacy, Medford, MA (Jan.).

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