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CHAPTER 4

ENTREPRENEURSHIP THROUGH MERGERS AND ALLIANCES

Schumpeter remixed

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A century ago, Joseph Schumpeter proposed that the essence of entrepreneurship is collaboration—what he called "making new combinations." This concept covers the following five cases: (a) the introduction of a new good, (b) the introduction of a new method of production, (c) the opening of a new market, (d) the conquest of a new source of supply, and (e) the carrying out of the new organization of any industry. He noted that the individuals whose function it is to carry them out are called "entrepreneurs" (Schumpeter, 1911/1934, pp. 66, 74).

This chapter examines the implications for business strategy of taking this view of Schumpeter seriously. How do these business combinations create new value? We need to take on this broad question on its own terms, not just as it relates to start-ups and innovation. I offer a framework for analyzing this question, which draws on well-known theories in economics and management: the resource-based view of the firm, transaction cost economics, and various concepts from industrial organization, bargaining, and strategy.

The reasoning here follows that in my book *Remix Strategy*, which was addressed to a managerial audience (Gomes-Casseres, 2015a).[1] The emphasis in this chapter is on the intellectual origins and logic of this reasoning. The chapter uses anecdotal evidence to illustrate some points and draws extensively but selectively on empirical and theoretical literature. It is not intended to be a survey of this literature, but the references to classic works and to recent research show the origins of the ideas in this chapter and their places in the current research landscape.

The first section in this chapter establishes the link between entrepreneurship and collaboration, drawing on Schumpeter's big idea just cited. This section identifies three

fundamental questions: how to create joint value, how to govern collaboration, and how to share value in a combination. (In my book, managers are advised to follow three "laws" that correspond to these questions.) The second section develops the first question and draws implications for strategic thinking and research. The third section develops the second question and highlights key issues in the governance of collaboration. The fourth section offers a way to think about the third question, again noting research questions along the way. The fifth and final section offers conclusions and broad questions for future research.

Entrepreneurship = New Combinations = Asset Remix

No business is ever built completely from scratch. Even so-called brand-new ideas are usually derived from old ideas. New companies often spin out from old companies. Incumbents, too, transform their businesses by mixing and matching internal and external resources. In Schumpeter's words, the new combinations are "simply the employment of the economic system's existing supplies of productive means" (Schumpeter, 1911/1934, p. 68).

This remixing of assets is the essence of innovation and entrepreneurship, and it can also revitalize mature companies. Schumpeter, in his original insight, allowed existing firms, investors, and managers to be entrepreneurial and did not restrict his definition to start-ups:

> We call entrepreneurs not only those "independent" businessmen . . . who are usually so designated, but all who actually fulfill the function . . . even if they are, as is becoming the rule, "dependent" employees of a company, like managers, members of boards of directors, and so forth, or even if their actual power to perform the entrepreneurial function has any other foundations, such as the control of a majority of shares. [But] it is not necessary that he should be permanently connected with an individual firm; many "financiers," "promoters," and so forth are not, and still they may be entrepreneurs in our sense. (Schumpeter, 1911/1934, pp. 74–75)

Take Apple's history as an illustration. Steve Jobs famously created the revolutionary Macintosh computer in the 1980s from elements copied from researchers at Xerox (Bill Gates did the same when creating Windows). Later, when Jobs returned to recreate Apple, he combined existing technologies and products into the even more revolutionary iPod, iPhone, and iPad. Virtually all the elements of these new products existed before, outside Apple. For example, touchscreen technology was invented in the 1960s, digital music players were everywhere, telecommunication services were well established, and digital content was already being shared on the web. He mixed and matched these elements brilliantly of course, infused the remix with Apple's unique design sensibility, and

created a new business model that totally transformed Apple. Concretely, Apple used various business combinations to achieve this remix—acquiring software start-ups, allying with component providers such as Samsung, and selling jointly with telecom providers like AT&T and Verizon. Its widely successful iTunes service relies on alliances with content producers such as studios, record labels, and publishers. Most recently, Apple acquired Beats to get into music streaming and is working with IBM to bring apps into the corporate workplace. (The story of Apple's iPod, iPhone, and iPad line is widely reported. See also Shih, 2009, and Burrows, 2007.)

The central point of view of this chapter is this: Collaboration is essential to entrepreneurship, because the latter almost always involves a remix of assets. To understand this process, we take a step back and examine this asset remix in its own terms, as a type of business strategy. This means asking when and why asset remix occurs, how it is implemented managerially, and what effect it has on the competitive performance of the parties to the collaboration. Schumpeter did not explore all these aspects of the strategy and management of new combinations. (He did investigate the role of credit and business cycles in the process.) Here I use modern theories in economics, organization, and management to examine these questions.

The concept of asset remix I am using is akin to what has been called "recombination" in the literature. There are several strands to this literature. The basic idea has been referred to by various business writers on entrepreneurship and innovation. For an early application in economics, see Weitzman (1998). Henderson and Clark (1990) define architectural innovation as a recombination of components. Following Schumpeter, students of entrepreneurship have also used the concept of recombination (Olsson & Frey, 2002). Closely related is the "make do with what is at hand" approach to innovation (T. Baker & Nelson, 2005) and the "brokerage" approach (Hargadon & Sutton, 1997, 2000). Aggregating and extending these views, some authors' theories of the firm or of value creation revolve in part around the recombination of assets (Kogut & Zander, 1992; C. Galunic & Rodan, 1998; Moran & Ghoshal, 1999). Applications of this concept to organizational design and leadership are in D. C. Galunic and Eisenhardt (2001) and Badaracco (2013).

The recombination or reconfiguration of capabilities or assets also features in some literature on the "dynamic capabilities" of firms (Teece, Pisano, & Shuen, 1997; Teece, 2007). A brief, good review of this literature is Helfat and Peteraf (2009). A recent statistical study of recombination within semiconductor firms is Carnabuci and Operti (2013). The role of alliances in restructuring a company is described in Dittrich, Duysters, and de Man (2007).

Another school of thought is closely related to what I mean by asset remix. Work on "open innovation" emphasizes how companies adopt ideas that arise outside their boundaries or can profitably transfer their ideas to external parties (Chesbrough, 2003). This perspective has led to research on how established firms invest in start-ups and how they can license their technology. These are forms of asset remix.

Lastly, a wide stream of work examines networks of collaboration, sometimes referred to today as business "ecosystems" (Moore, 1996; Iansiti & Levien, 2004a; Greve,

Rowley, & Shipilov, 2014). These networks represent asset remix on steroids, so to speak. Schumpeter did not examine these networks explicitly. But we know from historical research that many innovations in Schumpeter's day were driven by technological "convergence" (Rosenberg, 1976), as is also the case today in business ecosystems. Schumpeter did notice that new combinations were not evenly distributed though time but appeared "discontinuously in groups or swarms" (Schumpeter, 1911/1934, p. 223). These waves of entrepreneurial activity were central to his theory of business cycles. We will examine the logic behind these entrepreneurial waves in the section "Competitive Reaction Using Combinations."

Three Laws of Business Combinations

If such new combinations of resources can create new value, it pays to think explicitly about *remix strategy.* What does it take for firms to succeed with business combinations? My answer is relevant to all kinds of combinations, not just those that most would agree are innovative or entrepreneurial. These are the fundamental questions that any remix strategy must answer:

1. *How will a combination, or set of combinations, create joint value?* There must be a prospect for creating joint value from bundling assets—the proverbial 1 + 1 = 3. This joint value can stem from the usual sources of synergy in combinations, like scale and scope, or from sources particularly relevant to innovation, like flexibility and real options.
2. *How will the collaboration between the parties be designed and managed?* This second question is just as critical as the first; without it, the prospect of joint value will not be realized. It requires that the combined assets be governed effectively: 1 + 1 = 1, to continue the memory aid. This condition requires understanding and managing a range of collaboration modes, from ownership to contracting.
3. *How will the value created be shared among the participants?* This question is the trickiest to analyze and manage. The joint value has to be shared in a way that makes it worthwhile for each party to contribute to the collaboration. We can visualize this law as 1 + 1 = 1.4 + 1.6, or any other set of fractions that add up to the 3 in the first formula. This issue revolves in part around the bargaining power of the parties.

For managers, these three questions can be seen as principles of success, which is why I call them laws of business combination. Each of these three laws rests on a rich body of prior work, but these lines of study have not been synthesized before. Previous frameworks that introduce a related set of factors are in Dyer and Singh (1998), Lavie (2006b), and Adegbesan (2009). On acquisitions specifically, Sirower (1997) offers a related approach.

These laws and the analysis behind them are not derived from Schumpeter's writings, as he did not address the success factors in his new combinations. In this chapter I *extend* Schumpeter's thinking, adding to the mix modern theories that he did not have at his disposal, so to speak. In that sense, this chapter is a remix of Schumpeter's ideas with those of Edith Penrose, Ronald Coase, and scores of management scholars. At the same time, this remix opens up new questions for future research, beyond those posed by Schumpeter. I will flag those new questions for research throughout this chapter.

Asset Remix in Agile Strategies

Dealing with rapid, uncertain, and disruptive change is critical to success in innovative environments. Some strategists conclude that competitive advantage has become inherently unstable and that only a strategy that keeps moving fast can give a firm an edge over rivals (McGrath, 2013). As a result, firms need strategies that help them react to competitors with flexibility and agility. Remix strategy is a perfect complement to these strategies. See also Lavie (2006a) for other strategies for dealing with change in the environment.

At the root, making business combinations is a speedy way to reposition a company. Some types of business combinations will give more flexibility than others. Acquisitions and mergers usually represent firmer commitments to a direction than do alliances and constellations, which can be tweaked more readily over time. Exiting an alliance is usually less costly than reversing a merger. Switching partners, adding partners, and just growing a constellation can be important strategic moves in a dynamic environment. In fact, the easy-in, easy-out nature of alliances often leads to competition for partners, much as rivals sometimes compete in acquisition bidding wars.

Rearranging an alliance grouping internally can also have a significant impact. As an example, Google had grown its Android grouping rapidly to enter the smartphone market in competition with Apple. But as a result, the Android world threatened to become fragmented and somewhat overpopulated. Google's move to acquire Motorola was in part an effort to bolster one of the major handset makers and enable closer integration between software and hardware. At the same time, however, this move alienated some of Google's handset allies, which wondered if Google would begin to play favorites among them. In response to this reaction (and because of Google's relative inexperience in making hardware products), Google soon divested Motorola's handset assets to Lenovo. This further reorganization of the grouping may also have been prompted by Samsung's growing power as a handset producer. Internally, therefore, a group such as Android can evolve rapidly, partly because individual companies follow their own strategies to gain power within the group.

As a corollary to these switches, new combinations can also block rivals. In principle, every new alliance creates a new, friendly relationship and may generate several new enemies—the firms that weren't selected or those that were closed out of future partnerships. For this reason, every new alliance can create *barriers to collaboration* for future

suitors. Managers are not likely to admit to such motives in their press releases. But these tactics often appear to be behind some deals.

Many research questions follow from this line of reasoning. What are the relative advantages of different combinations in dealing with change? What is the trade-off between the agility and commitment of loose couplings like alliances? Can large firms learn to use new combinations to pivot as fast as start-ups, or are they inevitably burdened by the rigidities of their established businesses? Such questions demand an understanding of the challenge of making new combinations.

Competitive Reaction Using Combinations

A major question that deserves deeper consideration is how firms might react to the actions of a rival by using new combinations. Anecdotally, we observe that when key players in an industry begin to use business combinations for one reason or another, their rivals often are not far behind. This pattern happened in airlines, computers, pharmaceuticals, banking, media, communications, and other industries. Schilling (2015) found that new information technology encouraged the formation of alliances, and that these alliances in turn promoted innovation. These waves of new combinations are the modern equivalents of "the swarm-like appearance of entrepreneurs" that Schumpeter saw around him at the turn of the century (Schumpeter, 1911/1934, p. 230).

Why do new combinations come in waves? Schumpeter did not address this—he merely noted that they did. Today, research on the topic is still fragmentary, but it suggests that there is logic behind these supposed fads (Gomes-Casseres, forthcoming):

- *Responding to change in the business environment.* The simplest explanation of a combination wave is that firms are reacting to common changes in their business environment. For example, when the emergence of a new technology favors the formation of alliances, many firms in the industry will seek partners to gain these new capabilities. In a strict sense, this is not competitive reaction of one firm to another.
- *Matching capabilities of rivals.* As a general matter, we do know that firms often follow each other's strategic moves. Doing so might lower one firm's chances of moving ahead or—more important—falling behind its rivals. This pattern has been observed in market entry, and there is no reason that it cannot also give rise to new combinations. A current example is that incumbent car companies follow each other's moves in forming alliances with battery companies for electric vehicles or mapping companies for autonomous vehicles.
- *Pursuing first-mover advantages.* Sometimes, being first is the key to success. When an industry has high economies of scale, high customer switching costs, or steep experience curves, competitors can be expected to try to establish a dominant market share early. This is a common strategic move of entrepreneurial start-ups, of course, and can lead to a battle among new and established companies.

- *Striking preemptively.* There may be advantages to preemptive strikes in tying up, because of the limited opportunities for collaboration at any point in time. Tying up early gives a firm the best choice of partners and preempts rivals from tying up with an attractive partner. The preemptive partnerships in effect become a barrier to collaboration for rivals.

These early findings are hypotheses ripe for testing and further research. Do combinations in fact follow each other? What is the strategic value of moving first in tying up with the most productive partners? When should a firm use alliances to match the capability set of a rival? And when are mergers and vertical integration more attractive for these strategic goals? Many of these questions are empirical, so good data analysis ought to yield answers. There is also room for investigating the behavior with game theoretic models—another modern toolset that Schumpeter did not have at his disposal but that can usefully extend Schumpeter's insights.

Real Options in Remix Strategy

With change comes uncertainty and risk. Even so, Schumpeter aimed to "dispose of the conception of the entrepreneur as risk bearer." It is not that risk makes the entrepreneurs, he explained, but rather that the entrepreneur leads a process that is inherently risky. In Schumpeter's view, "risk always falls on the owner of the means of production or of the money-capital which was paid for them, hence never on the entrepreneur as such" (Schumpeter, 1911/1934, p. 75).

Today, we can go further than this statement. We now know that entrepreneurial strategies can also mitigate and even leverage risk and uncertainty. New combinations in effect can help us manage risk, if we think of them as "real options" (see Kogut, 2008, which contains his earlier work; a managerial approach in Luehrman, 1998; and a compendium in Reuer & Tong, 2007).

Many—though not all—business combinations can be seen as small steps on the way to a larger investment. Of course, big acquisitions don't come in bite-size chunks, so the real-option approach won't work there. But small acquisitions do, as do shared investments in large assets, alliances with limited equity outlays, minority investments in a business, and other small options. Some joint ventures, for example, are transitional steps toward a full acquisition or divestment. And alliances are the first steps toward greater and deeper collaboration between firms. Or under different conditions, each of these options may be disbanded—many alliances and joint ventures end that way too. With this approach, risk is managed and the flexibility of a combination becomes a benefit, not a burden. In this way, a combination may have an option value that goes beyond the expected returns.

This pattern, again, suggests multiple avenues for research on collaboration and entrepreneurship. How and when are new combinations used as real options? How do investors value these options? Do certain patterns of collaboration enhance or reduce

the option value of a combination, for example, by tying up future partners? For example, few start-ups have the capital to acquire all the resources they need to enter the market. Instead, they often seek partnerships and alliances to create that resource combination. This strategy, however, often presents a dilemma for them. On the one hand, investors like to see that a new idea has traction, which may be reflected in partnerships of various sorts. On the other hand, if the exit plan for the start-up is to be sold to a large firm, a wide net of partnerships may deter this action, if the would-be buyer prefers sole control, without external entanglements.

Creating Joint Value

Schumpeter's original insight was that new combinations of resources create new opportunities for profitable business. He described "entrepreneurial profit" as the added surplus that is generated when "promoters" introduce new machinery or a new product, access new markets or sources of supply, and make other new combinations (Schumpeter, 1911/1934, pp. 132–137). But he doesn't leave us with a crisp definition.

Today, we can interpret Schumpeter's view using modern ideas from the economics of industrial organization. We can say that new combinations create the opportunity for generating new value in the market. This new value is over and above the assets generated prior to the combination. Because it is produced from combining assets from different sources, we can call it "joint value." This concept is akin to the added value of team production or synergy in mergers and acquisitions (Sirower, 1997).

The potential for joint value stems from "complementarity" between businesses—an idea that existed in Schumpeter's time, but which was not as well understood as today. In economic theory, two goods are complements when having one, or more of one, increases the value of having the other, or more of the other. (Common examples include bread and butter, gasoline and cars, computer hardware and software.) For new combinations to create joint value, their assets must be complementary, in that the use of one asset in combination with another yields greater value than using them separately.

This is the fundamental idea behind any business organization, as Barnard (1938) explained early on. A modern treatment, including an application of the idea of complementarity to manufacturing, is in Milgrom and Roberts (1995). The relationship between complementarity and organizational ties was sketched in one of the earliest pieces about alliances, Richardson (1972). An explicit examination of the role of complementarities in making resources valuable is Schmidt and Kiel (2013).

The creation of joint value is thus more than an incidental result of collaboration—it is a necessary condition for success. Without this joint value, there would be no reason to collaborate, and no surplus to distribute among the parties in return for their inputs to the collaborative effort, or to the entrepreneurial promoter.

The joint value in any combination stems from the competitive advantage of the combination itself—that is, the potential for value creation compared to other combinations of assets. One combination may have greater economies of scale or scope than another, it may allow for better coordination of complementary assets, or it may offer greater options for exploiting new information.

This topic too is open for further research. How do remixes of assets lead to profits? Who gets rewarded for the effort of doing the remix? How do differences in structural form of combinations (e.g., alliance vs. merger) affect the creation of joint value? How can one spot complementarity that could lead to profits?

Combinations of Resources Compete, Not Firms

We can extend Schumpeter one step further. In his view it was the new combination of an entrepreneur that competed against the established routines of incumbent companies. He envisioned an economic system that functioned undisturbed until a new combination disrupted it—much as we talk today of the disruptive potential of innovations.

Two decades ago, when I presented my early work on alliance constellations at a conference, C. K. Prahalad, ever insightful, commented that this work begged the question of what our unit of analysis ought to be in strategy. Is it the firm? Is it a combination of a few firms? Is it the value chain network? Whichever the unit is that competes in the market, it can be thought of as setting goals, deciding on policies, assembling resources, and ultimately enjoying success or suffering failure. In the traditional approach to strategy, there are at least two ways to define this unit—at the level of the business or at the level of the corporation as a whole. The scope and content of strategy will be different for business units and entire corporations.

In remix strategy, neither of these units is the primary focus. Instead, the fundamental unit of analysis is the *combination of resources that yield value*. That combination competes with other combinations. Some combinations will gain advantage over others because they encompass just the right resources; others will gain advantage because they manage their collective resources better than others do. In other words, the bundled assets may be different or they may be governed differently from competitors.

Schumpeter did not focus on questions of asset governance. But today they are central to strategy, and we can tackle them with new concepts from organizational economics. Schumpeter did say that there were different forms of new combinations, some led by managers at existing companies and some being new firms. We'll return to this topic in the third section ("Governing Collaboration").

In today's terminology, we can say that the organization that governs the combination may be a firm—but doesn't have to be a firm. We know that there are many alternatives to this governance form—constellations of various shapes and sizes that are composed of firms and structured in many ways.

The Android constellation, as we saw, competes against Apple's iPhone combination, even though the two groupings are organized in very different ways. ARM Systems uses a constellation of licensees to compete against Intel, which competes much more on its own strength. In airlines, the Star Alliance constellation competes against other constellations, but each group has a slightly different organizational approach and all of them compete at times with single firms such as nonallied airlines.

In earlier work, I explored the theoretical basis for the distinction made here between firms and constellations as ways to bundle resources; see Gomes-Casseres (1996). The concept of an alliance constellation (Gomes-Casseres, 1994) is related to the "strategic blocks" in Nohria and Garcia-Pont (1991), the "webs" in Hagel (1996), and the "business groups" in the literature on emerging markets (Khanna & Rivkin, 2001; Khanna & Yafeh, 2007). My definition of a constellation is more restrictive than these concepts and closer to the "constellations" of Lorenzoni and Ornati (1988), who appear to have been the first to use that term, and to those of Normann and Ramírez (1993). For an early review of this literature, see Gulati (1998).

In every industry, we can find such variety in the organizational form of the competing combinations. This shift in perspective—from firms to asset combinations—is not trivial. It means that the firm and all of its attendant organizational choices are variables in the equation of competition, not fixed parameters. A growing body of literature recognizes the commonalities between firms and other ways to combine resources. A recent survey of these fundamentals is found in Puranam, Alexy, and Reitzig (2014). Theoretical models of the firm that can be used to understand other forms of organization are in Bolton and Dewatripont (1994) and Rajan and Zingales (2001), which recognize explicitly that the economic and legal definitions of the firm may be different. See also the case study analysis in Foss (2003).

This view of combinations as the units that compete is fully consistent with and elaborates on the resource-based view of the firm. Edith Penrose explained that the firm is a combination of resources managed in a coordinated fashion. Such managed bundles of resources are the keys to success, but we now realize that they may not always be constituted as a firm. They can come in other forms too—*the firm is a bundle of resources, but a bundle of resources is not always a firm.* I flip this equality to emphasize that the way the bundle is managed is in itself a tool in competitive strategy. Should Apple be more or less open to partnerships in its quest to compete against Android? Should the airline constellations promote closer integration and joint services and brands, or looser arrangements? How many partners should ARM have? Such questions are now strategic choices at the interface between collaboration and entrepreneurship.

Edith Penrose's *The Theory of the Growth of the Firm* (1959) is the foundation of the resource-based view of the firm, though this view was not developed further until the 1980s. These ideas entered the current strategy literature in force following Wernerfelt (1984). Interestingly, Wernerfelt later lamented in a retrospective that most of the research citing resource-based advantages of firms neglected to account for the strategic value of resources that were not wholly owned by the firm, such as in licensing and

joint ventures; see Lockett, O'Shea, and Wright (2008). An overview of current theory in this field is in Barney and Clark (2007).

The Match as the Source of Advantage

Because every firm has a different set of internal resources, the match that each can make with a given external resource will differ too. This idea is well known in acquisitions; one acquirer might be able to make more out of a given target than another because of how that target will fit into its business. Such a purely *combinatorial* advantage depends less on how the combination is governed than on what is combined with what.

This distinction focuses a spotlight on a current puzzle in the field of strategy. When does a given resource—an asset or a capability—yield competitive advantage to a firm? In short, the traditional argument is that certain scarce and valuable resources can set the firm apart from others. Examples are specific brand names or unique assets or capabilities in certain fields. A more recent branch of this school of thought argues that the particular *combination* of resources within a firm sets it apart from the others, not the characteristics of the resources themselves. For example, imagine two firms that can hire the same kinds of engineers and salespeople, have access to the same capital and technology markets, and sell to similar sets of buyers. Even then, the firms may well differ in how they mix and match these inputs and in the depth of the specific capabilities they choose to build from their common set of assets. As a result, the same resource may yield a certain competitive advantage to one firm and not to the other.

Relationship Management as the Source of Advantage

Firms accessing external resources may also differentiate themselves from rivals with their *relationship* advantage—the ability to govern and integrate an external resource to yield maximum value. In acquisitions, again, some firms have special skills in postintegration management; in alliances, some firms are partners of choice because of their relationship management capabilities.

There is a large body of literature on how companies might best organize their alliance strategies, much of it written for managers. See Bamford, Gomes-Casseres, and Robinson (2003) and Kale, Dyer, and Sing (2001, 2002). For a focus on contract design, see Argyres and Mayer (2007). For a focus on the alliance portfolio, see Heimericks, Klijn, and Reuer (2009). A separate body of research addresses how firms manage their alliance portfolios. Managerial approaches are in Bamford and Ernst (2002), Parise and Casher (2003), and Lavie (2009), and a theoretical approach is in Ozcan and Eisenhardt (2009).

There are many classic research questions in this domain. What kinds of combinations yield value? How do parties complement their resources through network connections? And so on. Each of these questions depends not only on the content of the collaboration or on the resources of the parties but also on how the collaboration is managed. We turn to that now.

Governing Collaboration

To realize the potential joint value of a combination, the collaboration needs to be designed and managed effectively. In Schumpeter's view, this was the role of the entrepreneur. Beyond that, Schumpeter was not explicitly concerned with how the new combination was organized. In our treatment, we take a broader view of this issue and focus not on the action of one leader (the entrepreneur), but on the organizational context of the collaboration.

Schumpeter recognized that organizational strategy mattered to innovation, but he did not delve much deeper. He observed that it was hard and not common for existing businesses to start new enterprises, because their routines of production are set. That is why "new enterprises are mostly founded by new men and the old businesses sink into insignificance." But sometimes, new enterprises are indeed started by incumbents, and the new and old businesses will coexist at first. So, he allowed that an innovating entity may have different forms of organization and different scopes of business. He concluded: "The fact that . . . the entrepreneur himself already has the necessary means of production, wholly or in part, . . . does not change his function as an entrepreneur" (Schumpeter, 1911/1934, p. 136).

Today, we are more concerned with organization structure and strategy, and on this we have new theoretical conceptions and empirical evidence that he did not have. In this section, I will apply the findings of the literature to the economics of organization, which today is extensive and deep. The question for this section—a question that Schumpeter left for us to figure out—is this: How is the bundle of assets in the new combinations governed?

Governance of Assets ≠ Ownership of Assets

Governance, in the usual business parlance, refers broadly to the way decisions are made about the use of the corporation's assets. But we don't restrict the term to how a board of directors makes decisions or, more important, to the corporation at all. The term can be stretched to refer to how best to manage a combination of assets to create value. This key question in remix strategy differs from the usual concern with governance, because the combination of assets often includes resources that don't fall under the scope of the board of directors at all.

Remix strategy does sometimes call for full ownership of resources. Traditional acquisitions remain common and effective ways to generate value from new combinations. But sometimes an acquisition is not the best way to recombine resources, as we have seen. Sometimes, it's not even a practical, feasible, or legal option. In that case, the combination has to take the form of something short of acquisition, even if that form may be challenging to manage. (Of course, managing acquisitions effectively is challenging too.) In effect, alliances, constellations, and other types of external relationships recombine resources through mechanisms other than ownership.

In other words, ownership is not a requirement of a new combination, but simply a feature of how the combined resources are governed. Still, we might learn much from the organizational strategies that firms use internally. For example, depending on a firm's strategy and situation, it may prefer to manage internal resources in a centralized or decentralized way. It may encourage close cooperation between certain units, each of which represents a different combination of resources. Or it may allow some units to compete or at least to offer parallel services to different segments of the market.

It is tempting to say that the governance of constellations is simply an extension of these organizational strategies, but there's nothing simple about it. Constellation design and management are particularly complex because of the multiple and separate interests usually involved. In internal organization, even disparate units have common interests in that they are owned by a single firm. Not so for constellations of firms. Furthermore, there are usually better or more familiar mechanisms for managing resources inside firms than across firms. Internal management relies on bureaucratic power, incentives and controls, and routines and processes, among other factors. Cross-firm management uses all these tools but does so in an environment of messy combinations of contracts and ownership rights, plus more ambiguous factors like organizational trust and reputation.

The fundamental idea is that the organizational form of the asset bundle will affect the joint value created by shaping the incentives for cooperation. For a formal model of this argument—but a model applied to internal firm organization—see Dessein, Garicano, and Gertner (2010). Recent empirical analyses of how goals and tasks shape alliance design (and, sometimes, performance) are in Oxley and Sampson (2004); Sampson (2007); Kale and Puranam (2004); Hoetker and Mellewigt (2009); Contractor, Woodley, and Piepenbrink (2011); and Lavie, Haunschild, and Khanna (2012). Studies of how network structure affects the performance of combinations are in Afuah (2013) and Sytch and Tatarynowicz (2014).

Alliance = Management of Incomplete Contracts

Early studies of alliances simply defined them as something in between a pure market contract and a full merger—in effect, a middle ground or hybrid form between two governance extremes. That view is correct, but it is worth pinpointing why alliances are different from these two extremes. This is where transaction cost theory is useful in the analysis of entrepreneurship and collaboration. Economic theory plus management practice can be boiled down into this specific definition of an alliance—or of any collaboration beyond a simple transaction:

An alliance is…
…an organizational mechanism
…that uses shared control to manage
…an incomplete contract
…between independent parties, and
…that is sustained by relational value.

Read as one sentence, it's a mouthful. But each of the five parts of the statement should be clear by now. First, an alliance is a way to administer a business combination, whether with formal corporate structures, looser management processes, or both. Second, none of the parties to the alliance has full control over decisions, or else the deal would be called a merger. Third, the joint work done by the alliance is not fully specified in the formal agreement. Through no fault of the lawyers, the alliance will face important open-ended questions, decisions on issues not foreseen at contract signing, and so on. If it were not for these open ends, the agreement between the parties would be called a trade by our terminology. Fourth, the parties each stand alone, in that they are not joined by ownership. Finally, this messy deal structure hangs together because the parties expect to benefit from the relationship now and in the future. Technically, we can say that the incomplete contract is held together by a relational contract.

The literature on this topic is extensive. A lot of research has been done in the last two decades on organizational economics, and four Nobel Prizes in economics have been granted for it—to Ronald Coase, Oliver Williamson, Oliver Hart, and Bengt Holmstrom. Ronald Coase's (1937) original statement and Williamson's (1975) classic book are starting points. Williamson's (2010) Nobel Prize lecture summarizes the development of the field. For an excellent treatment of core ideas in modern organizational economics, see Roberts (2004). A useful clarification about the advantages and disadvantages of firms and markets is in Gibbons (1999). An alternative view, emphasizing an organization's ability to make adjustments, is in Wernerfelt (2004). Legal scholars have also addressed transaction costs, often with data on actual contracts and useful clarifications of how courts handle these problems. See Hadfield (1990), Schwartz (1992), Scott (2003), and Mouzas and Furmston (2008). Good examinations of the transaction cost and relational contracting approaches, with applications to alliances, are in Hennart (1993) and G. Baker, Gibbons, and Murphy (2008).

Unfortunately, as this stream of work made its way into management journals, the resource-based view of the firm has sometimes mistakenly been pitted against transaction cost economics as "alternative" theories of the firm. Most scholars now realize that the two approaches are complementary and that they address different aspects of one phenomenon. That is the approach taken here. Articles that synthesize these two fields have been written by Conner (1991), Barney (1999), Gibbons and Henderson (2012), and Argyres and Zenger (2012). A synthesis applied to the theory of the multinational enterprise is in Hennart (2009, 2012).

More work can be done on the intersection of the resource-based view of the firm and organizational economics—marrying Edith Penrose and Ronald Coase, so to speak. What is the comparative advantage of different organizational forms in terms of their impact on innovation? When is one way of governing a new asset bundle better than another? How do different governance forms affect the success of the asset remix, or the new combinations, to use Schumpeter's language? This work needs to focus on both the content and the form of a combination—what is being combined as well as how it is being combined. These are central topics in the study of both entrepreneurship and alliance strategy, and the fields of study have much to teach each other. In addition, the

study of mergers and acquisitions belongs in this mix, as these deals are yet another way to govern a new combination.

Sharing Value

However joint value is created, ultimately it must be distributed among the participants. Without this, there is no incentive for the participants to contribute resources to the collaboration. And without that, they will forego the collaboration to begin with. So collaboration depends on the expected gains that each party will receive, which in turn depends on the value-sharing formula.

Schumpeter understood this point implicitly. He argued that each party had to earn more than it could before in its existing routines, or than it could own in another new combination:

> Clearly this valuation is necessary in order to make any estimate of the advantage of the new combination, and without it no action would be possible. . . . [L]eaders must compare the result of the contemplated combination not merely with the result that the same productive factors could produce in the same time in their previous method of employment, but also with the results of other new combinations which could alternatively be carried out with the same means.
>
> (Schumpeter, 1911/1934, p. 104)

But as with organizational strategy just discussed, Schumpeter, again, did not delve deeper into this question. I agree that the value-sharing formula depends on the opportunity costs of each asset in the bundle. But it is important to add that this value sharing is not a zero-sum game, even though our earlier memory aid might have suggested this ($1 + 1 = 1.4 + 1.6$). In fact, collaboration in the pursuit of value creation is a variable-sum game akin to the underlying bargaining models in Schelling (1960) and Fisher and Ury (1981). In this kind of game, better collaboration can lead to higher joint value, and thus greater returns once that value is shared. In the framework offered here, it means that the three laws of business combinations that we set out at the beginning of the chapter are intimately intertwined.

Value Is Earned at Two Levels: The Combination and Its Members

Strategic options are normally evaluated by their promised contribution to a firm's performance. Here again, in remix strategy, sticking to traditional metrics can lead to misguided decisions. In this world, performance can be measured at different levels and locations in a combination.

Should a resource combination be evaluated as a whole or in terms of its constituent parts? In some forms of resource combination, a "team owner" will be interested mostly in the success of the combination as a whole. When firms or a common set of shareholders own a combination of resources, this is often the case. But what if the elements of the combination are owned by different interests? That will usually be the case in a constellation of related but independent firms. Each firm is then likely to measure success on its own terms—that is, the firm will aim for a return on its own resources. But paradoxically, this return will depend on the performance of the group as a whole.

Whenever innovative firms join to compete as a group, they thus need to focus on two determinants of performance: (a) the competitive advantage of the group over other external rivals and (b) their own competitive advantage over other members inside the group. This view suggests a number of research questions that can be asked of any entrepreneurial effort, or new combination, in Schumpeter's view. First, what determines the overall performance of the new resource combination? And second, what is the bargaining position that each member commands inside a combination? Do the partners add the value they were expected to add? If the contributions differ from the plan, what is the effect on the governance of the combinations?

Value-sharing issues are reflected in the debate around what the business press calls "coopetition," meaning a relationship that is both cooperative and competitive. Research on the interaction between these seemingly opposing economic forces is emerging. The simplest case of this is when firms collaborate to create joint value and then compete to capture their share of it. The classic treatment is in Brandenburger and Nalebuff (1997) and Brandenburger and Stuart (1996). The latter also clarifies the term *value added* and its division among players—theory that I build on in this chapter and in my recent work. In particular, the game theoretic models show that no player can capture more value added than it adds to the game. So value sharing in my framework is constrained by the value of the contributions of each party, at least in an equilibrium sort of world. See also the stream of work on resource combination and value capture in Lippman and Rumelt (2003), Adegbesan and Higgins (2010), and MacDonald and Ryall (2004).

A number of studies have proposed related approaches to how companies create and earn value from group-based strategies; see Evans and Schmalensee (2007), Nambisan and Sawhney (2011), Eisenmann, Parker, and Van Alstyne (2011); Thomas, Erkko, and Gann (2014), and Iansiti and Levien (2004a, 2004b). A few studies of network structure address the effects of network positioning on performance; see especially Greve et al. (2014). An application to the theory of the firm is in Kogut (2000). Recent statistical studies have been done by Schilling and Phelps (2007), Lavie, Lechner, and Singh (2007), and Shipilov (2009). Separately, I have addressed how the competition between groups of firms may affect performance; see Gomes-Casseres (2003, 2006). Others have written theoretical and empirical papers on this theme; see Das and Teng (2002), Rowley, Baum, Shipilov, Greve, and Rao (2004), Gimeno (2004), Lazzarini (2007), and Adegbesan and Higgins (2010).

The principle of multilevel competition recognizes that in the end, firms will demand a return on their own resources, whether as rivals or as members of rival groups.

The game of strategy may have changed—with complex constellations now battling against firms—but we still keep score the old way. Further research can tease out the new rules of this game. How do returns to members in an alliance influence their effort, and thus the outcome of the alliance? What mechanisms can be used to link the performance of the group to the rewards of key members? How do changes in the shares of value earned by partners affect the management of their incomplete contracts? How does the survival of a collaboration depend on the value-sharing formula or changes in the value shares?

Conclusion

Entrepreneurship involves remixing assets to create new value. We derived this basic idea from Joseph Schumpeter's classic work. To develop a complete picture of the link between entrepreneurship and collaboration, we then remixed Schumpeter's ideas with modern economic theories. The result is a model of what we broadly call remix strategy.

Remix strategy revolves around three questions: how to create joint value, how to govern the collaboration, and how to share the value created. These questions have not usually been addressed in the literature on entrepreneurship, though they are central to much research on alliances and on business collaboration more generally. I have sought here to marry these fields in the hope of providing new perspectives on entrepreneurship. At the same time, seeing business combinations as entrepreneurial acts throws a new light on classic questions in the alliance field. Like any good remix, this combination of perspectives benefits all sides.

Questions for further research have been flagged at various points in this chapter. I won't repeat those here. But it is worth recapping the broad research themes that emerge from my three-part framework:

1. **How to create joint value.** Research on this topic needs to address the economics of combinations, more so than the form or structure of the combinations. Joint value in a combination usually stems from economies of scale or scope, from better coordination of interdependent activities, or from an expansion of options for future action (Gomes-Casseres, 2015a). Each of these avenues to create joint value demands its own asset bundle—sometimes we need to bundle similar assets (e.g., to generate scale economies) and sometimes we need to bundle different types of assets (e.g., to exploit coordination benefits). How can managers and entrepreneurs identify the key assets that they need to remixed? And how does the nature of these assets shape how they can be bundled? Entrepreneurs are known for their skill at accessing resources they do not own—but what resources should they reach out for first or with greatest effort? The argument here suggests that these entrepreneurs ought to focus on the added value that can be generated by their combinatorial strategy.

2. **How to govern the collaboration.** Questions of the structure of collaboration are central to much research in the alliance field. Students of entrepreneurship would benefit from translating this research to the organizational questions they address. For example, we know that an entrepreneurial organization (e.g., a start-up) will benefit from agility as it tests and pivots repeatedly in search of the right product–market match. Alliances are ideal for testing the mixing and matching assets that may be needed for these pivots. Furthermore, these alliances are ways to manage open-ended agreements, where the future is not known. How can entrepreneurs best use the inherent flexibility of alliances? Is there a trade-off between the flexibility of accessing an asset through an alliance and the greater control and commitment involved in owning the asset?
3. **How to share the value created.** Research on alliances as well as entrepreneurship is concerned with this question, although it is not usually framed as we do here. All parties involved in both alliances and start-ups are naturally concerned with the return on their efforts. But this is not purely a matter of capturing value created elsewhere or independently of the sharing regime. We have seen here that the returns to the parties depend on both their joint effort and their share of the joint effort. Further research ought to address this non-zero-sum game. How do sharing formulas affect effort, and thus joint value? How do the mechanisms of creating joint value (question 1 earlier) and the structure of governance of the bundle (question 2 earlier) affect the sharing regime?

These three broad areas of inquiry are best addressed with a mix of theories and ideas, as I have shown. Schumpeter set us on our way with his original insights. Researchers today can rely on a rich set of ideas to understand the new combinations that lie at the heart of entrepreneurship. My purpose here has been to provide a logical context—a conceptual matrix—to help the reader reinterpret work in both entrepreneurship and collaboration. Even so, many of the ideas and papers cited here are not commonly used by scholars in these fields, or are known by researchers in one field but not in the other. That is why I hope that the exposition here will contribute to the reader's own intellectual remix.

Note

1. Sections of this chapter draw directly on my book (Gomes-Casseres, 2015a) and article (Gomes-Casseres, 2015b), used here with permission.

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