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Partner Selection Criteria in Strategic Alliances:
When to Ally with Weak Partners

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Abstract:

In many emergent markets, cross-industry alliances are necessary to develop and market new products and services. The resource-based view suggests that firms form alliances to access or acquire valuable, rare, non-imitable and non-substitutable resources, and that such access determines the level of profits. Hence, firms confronted with the choice between partners with strong versus partners with weak resource endowments should choose the former. We contest this view and argue that firms benefit from allying with weak partners at certain times. In essence, we suggest that partner selection involves assessing the relative importance of strong resource endowments and aligned strategic aspirations over time. By adopting an evolutionary approach, we show that appropriate partner selection criteria are dynamic and may involve allying with weak partners in the initial exploratory stage, with weak and/or strong partners in the development stage and with strong partners in the maturity stage. Our findings suggest that the resource-based understanding of strategic alliances should be extended to include a more profound role for a partner firm's strategic aspiration.

Key words: Strategic alliances, partner selection, resources, aspirations

JEL Codes: L14, L86

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1. INTRODUCTION

Timing of market entry is critical for firms in most existing and emerging markets. As a market evolves, incumbents and new entrants must decide whether to develop and market products and services for new subfields early, to adopt a wait-and-see approach, or not to do it at all (Lieberman & Montgomery, 1988; Mitchell, 1991). But entering technology-intensive emerging markets requires intense collaboration with external partners (Doz & Hamel, 1998), because of time compression diseconomies (Dierickx & Cool, 1989) or dissimilarity of activities (Richardson, 1972) and expertise (Powell, Koput, & Smith-Doerr, 1996). In emerging markets, particularly cross-industry alliances have gained momentum recently, partly fuelled by learning benefits and the necessity of diverse capabilities in converging markets (Lubatkin, Florin, & Lane, 2001). Thus, a vital question for firms upon entering an emerging market is how to decide who to ally with.

While most work on strategic alliances has concentrated on *why* they form, as cited above, and some work on *how* they should be organized (Mjoen & Tallman, 1997) and *when* firms enter them (Powell & Brantley, 1992; Suarez-Villa, 1998), little research has focused on *who* firms ally with (Gulati, 1995). Yet, partner selection is an essential factor influencing the performance of alliances (Ariño & de la Torre, 1998; Ireland, Hitt, & Vaidyanath, 2002). Also, alliances can be sources competitive advantage (Dyer & Singh, 1998) and may “*shift the very basis of competition to a new level – from firm vs. firm to (...) rival groupings of collaborators*” (Powell, 1987: 68), which means that the performance of a firm is intimately tied to the performance of its collaborative engagements (Dyer & Nobeoka, 2000). The resource-based view informs partner selection decisions through its core claim that access to strong resources forms the basis for competitive advantage. It follows that the greater a firm’s stock of resources, the greater the firm’s attractiveness to partners (Ahuja, 2000) and the normative advice to managers is therefore to seek allies with strong resource endowments in their respective markets. We challenge this general contention and argue that at times it is advantageous for firms to ally with weak partners in terms of their resource endowments but whose strategic aspirations are strongly aligned with those of the central firm. Consider the following: Does it make sense to ally with Coca Cola, because it has a well-developed distribution system, if

Coke is not interested in deploying it in your interest to enter a new market? Does it make sense to ally with Nike, because its marketing skills are superior, if Nike will not give you access to these or deploy them to support your market entry? Does it make sense to ally with Sony, because of its skills in design and miniaturization, if Sony is not interested in these skills being utilized to your advantages? We believe not. However, it may make sense to ally with firms with less developed but *sufficiently* good distribution systems, marketing capabilities or miniaturization expertise if these firms genuinely aspire to develop and deploy their skills to the benefit of the alliance.

Theory on partner selection in interfirm collaborations remains in general weak and more research is required to make it relevant for managers in particular contexts (Chung, Singh, & Lee, 2000; Geringer, 1991; Hitt, Dacin, Levitas, Arregle, & Borza, 2000; Jones, Hesterly, Fladmoe-Lindquist, & Borgatti, 1998). Jones et al. argue that we need more understanding of how alliance partners are chosen in multiparty collaborations among other issues in terms of “the criteria these selections are based upon” (1998: 408). The key question of this paper is how firms should select cross-industry alliance partners for entering new markets. Markets emerge every time the technological regime shifts, and at these points firms decide whether to offer a product or service that differs in some way from their current offerings (Helfat & Lieberman, 2002). By adopting an evolutionary perspective, we show that the importance of different partner selection criteria changes over the course of the industry life cycle.

We use the emergent European market for mobile internet services as an indicative case study. A comparative analysis of alliance partner selection strategies of two key firms in the market is used as a reference point to illustrate the validity of our propositions. The case study method is chosen as it is appropriate for theory development (Yin, 1989) in new topic areas (Eisenhardt, 1989). Data was extracted from secondary sources including annual reports, financial analyses, media announcements, and business press in general. This approach is widely used and suitable as all significant alliance relationships can be assumed to be reported in these media (e.g. Singh, 1997).

The paper contributes to the strategic alliances literature on at least three accounts. First, it extends the resource-based view by accentuating strategic aspirations as an additional criterion for the partner selection decision. Hereby, the paper also appends

to form a more context-dependent resource-based perspective. Second, we link criteria for partner selection to the industry life cycle and propose that such criteria are dynamic with varying relative importance over time. By making this link, we also connect the choice of strategic posture - i.e. first-mover versus late entrant – to the partner selection criteria, claiming that these criteria may differ between firms with different entry strategies. Third, by abandoning a unilateral focus on resource endowments in favor of a broader focus encompassing aspiration levels we, on a practical level, derive more precise normative guidelines to managers regarding partner selection decisions. This may potentially assist in alleviating the reported unsatisfactory performance of strategic alliances (Bleek & Ernst, 1991; Kogut, 1988; Madhok & Tallman, 1998; Park & Ungson, 2001).¹

2. THEORETICAL APPROACHES TO STRATEGIC ALLIANCES

Research on strategic alliances has in broad terms departed from transaction cost economics (e.g. Hennart, 1988, 1991; Williamson, 1991) and the resource-based view of the firm (e.g. Das & Teng, 2000; Eisenhardt & Schoonhoven, 1996). Transaction cost theory has successfully explained make-or-buy decision in relatively stable environments (e.g. Balakrishnan & Wernerfelt, 1986; Joskow, 1985; Masten, Meehan, & Snyder, 1991; Monteverde & Teece, 1982; Walker & Weber, 1984; Walker & Weber, 1987). However, it has difficulties explaining the organization of innovative activities in strategic alliances in rapidly changing environments, as engaging in small number bargaining in highly uncertain settings runs counter to the transaction cost logic. Williamson (1994:85) acknowledges that in transaction cost theory “*network relations are given short shrift*” and that innovation causes problems for the theory, why “*added apparatus is needed*” (Williamson, 1991: 293). Alternatively, the resource-based view suggests that firms seek to obtain control over resources that can be sources of competitive advantage (Wernerfelt, 1984). A firm’s propensity to engage in interfirm collaboration can be ex-

¹ Studies have included both objective failure measures such as survival, termination, duration, financial gains and subjective or measures including goal attainment, satisfaction, learning, competence building (Park and Ungson, 2001). Kale, Dyer and Singh (2002) find a positive correlation between objective and subjective measures.

plained by its need for access to such resources (Gulati, 1999; Harrigan, 1988; Nohria & Garcia-Pont, 1991). Das and Teng note: “*A resource-based view seems particularly appropriate for examining strategic alliances because firms essentially use alliances to gain access to other firms’ valuable resources*” (2000: 32-33).

2.1 Criteria for Partner Selection in Current Literature

The starting point of transaction cost analysis is not whom to partner with but rather how a particular exchange should be organized given certain exchange partners and exchange attributes (Williamson, 1985, 1991). Confronted with the partner selection choice, transaction cost theory suggests that firms choose allies by a comparative assessment of transaction costs involved in the specific relation. Implicitly, partner choice derives from economizing on the cost of contracting considering future contingencies. The resource-based view provides insights about what kind of resources that may form the basis for an alliance and suggests that firms will benefit from allying with the firm holding the strongest complementary resources (e.g. Miotti & Sachwald, 2003), which can include various kinds from physical equipment over knowledge to reputational assets. In addition to seeking attractive partners, the firm must also itself have strong resource endowments (Kogut, Shan and Walker, 1992; Shan, Walker and Kogut, 1994; Ahuja, 2000). Hence, firms should conduct a comparative assessment of potential complementary partners’ resource bases and subsequently choose the strongest. The costs associated with accessing resources also matter, and firm will therefore choose the partner, who provides the best cost/benefit relation.

Various other views on partner selection has emerged (Geringer, 1991; Pfeffer & Salancik, 1978; Podolny, 1994; Saxon, 1997; Stuart, 1998). Among these a social perspective, following Granovetter’s (1985) critique of static efficiency theories in terms of “undersocialializing” the partner selection aspect, has recently received support. Gulati (1995) finds that prior alliances create ties that directly and indirectly influences the choice of partners. Similarly, Gulati and Gargiulo (1999) find that the probability of a new alliance between two specific firms increases with their interdependence, their priorities, common third parties and their centrality in the alliance network. Li & Rowley (2002) find that in addition to different evaluation criteria, inertia plays an important role

in partner selection. Both Gulati (1995), Li & Rowley (2002) and Gulati & Gargiulo (1999) focus on intra-industry alliances.² However, entry alliances in emerging markets often involve firms from different industries, which, because of industrial separated pasts, may not have any previous direct ties and merely insignificant indirect ties.

2.2 Insufficiency of Current Theories

Resource-based theory aims to address *which* assets should be brought together, whereas transaction cost theory informs about *how* these assets should be brought together. For this reason, transaction cost economics does not inform the specifics around selection criteria. The resource-based explanation offers some managerial guidance, but the proposed prescriptions are problematic for several reasons. *First*, the general argument that strong resources in the relevant market equals and attractive partner is too simplistic. A growing literature developed by Joseph Schumpeter (1934) and pioneered by Clayton Christensen (1997) documents the failure of leading firms, signaling that allying with the strongest firm may not always be the best strategy. *Second*, the resource-based view is not very context-sensitive (notable exceptions are Miller & Shamsie (1996) and Brush & Artz (1999)), yet, context is very important for partner selection (Geringer, 1991; Mahnke, 2001). *Third*, it views the possession of critical resources as a *primary* reason (Hitt et al., 2000) and even *prerequisite* for alliance formation (Das et al., 2000) and consequently pays less attention to alternative parameters. In sum, the resource-based contribution to the alliance literature has focused on the static properties of firm's existing resource endowments and hence implicitly adopted simplifying assumptions of constant or neutral levels of alternative explanatory variables.

3. ASPIRATION LEVELS AND THE SHADOW OF THE FUTURE

Current research addresses partner selection, because it affects the mix of resources and capabilities available to the alliance. Yet, it is not necessarily the critically of resources (Barney, 1991) that determines the attractiveness of a partner. Spekman (1988) claims

² Gulati notes that "A useful extension of this research would examine both cross-industry and intraindustry alliances within a single unifying framework" (1995: 646).

that selection of a good partner heavily depends on goal congruence between partners. Taking the argument further Hamel, Doz & Prahalad (1989) argue that when seeking collaborators for technology-related projects, firms should seek partners whose strategic goals converge, while their competitive goals diverge. Koza and Lewin (2000) argue that one of the most common reasons for alliances to fail is lack of recognition of the close interplay between the overall strategy of the firm and the role of an alliance in that strategy. We suggest that the aspiration level of a firm to enter a particular technical subfield of an emerging market with its resources - weak or strong - is an important criterion for partner selection. Strong and aligned strategic aspirations are positively related to cooperative behavior and thus partner selection (Axelrod, 1984). The degree of this aspiration for entry is primarily determined by the expected relative *changes* in the demand for a firm's products upon entering a new market – its shadow of the future (Dasgupta & Stiglitz, 1980; Klepper, 1996). Different firms will have different potential gains from entering a market, which make it advantageous for some firms to enter a market at one point in time, whereas others will find it unattractive at this point. Incumbents and potential new entrants are for instance likely to act strategically different as market entry for incumbents will cannibalize revenue streams as existing customers will migrate to the new segment, whereas entry for new-comers allows for additional revenue streams (Reinganum, 1985).³ Thus, incumbents may not have the incentive (Geroski, 1995) or the choice to enter early as the demand of their existing customers shapes the allocation of resources, which may mean that they foreclose new opportunities (Christensen & Bower, 1996). Mitchell (1991) concludes that incumbents will perform better if they postpone entry until new entrants have tested the products and markets, and Afuah and Utterback (1997) note that market leaders may retrench to attempt to prolong the viability of their established positions for as long as possible. Such behavioral differences will fit to different degrees with the strategic aspirations of the firm seeking an ally. These considerations are important for partner selection in markets, where entry cannot be made by a single firm but necessitates coordination of entry strategies across firms in an alliance.

³ Not all existing customers migrate instantly and often product and service generations co-exist for periods of time, yet this is less important for the argument here.

The argument links to the resource-based view, which contends that within an industry firms with different pre-entry resources have aspiration to enter at different points in time (e.g. Mitchell, 1989; Schoenecker & Cooper, 1998). The valuation of net benefits from entry is thus not independent from, but also not solely determined by, the existence and utilization of a firm's resources. Incumbents and new entrants typically have different resource endowments as incumbents have adjusted their resources to the industry setting and build knowledge of the particular market, which the new entrants have not. Because industry-specific resources and routines of new entrants are less well developed, the resource endowments of incumbents in general tend to be strongest. This naturally depends on whether the emerging market is based on competence-enhancing or competence-destroying technologies (Tushman & Anderson, 1986). However, for our argument this distinction is less essential as we merely advocate for a more profound role for aspiration levels. The implication for partner selection is that despite the fact that a firm has attractive resources in a market, it may not be an attractive partner as its aspirations to deploy the resources in accordance with the strategic desires of the central firm may be insignificant. In addition, firms with strongly aligned entrance aspirations may be more inclined to make alliance-specific investments, which are associated with higher performance (Dyer, 1996).

3.1 Relative Importance of Resources and Aspirations

In general, it is attractive for firms to ally with partners that have strong resource endowments and great aspiration to enter the market and unattractive to ally with weak firms with low aspirations. However, a dilemma surfaces when the attractive combination is not available in the partner market and firms must decide whether to ally with firms with strong resource endowments and then make the aspiration strength a secondary criterion or whether to ally with firms that have great aspirations to enter and make the resource strength a secondary criterion? None of these options implies that "anything goes" for the second criterion. Naturally, firms should not ally with partners that have either fully opposite aspirations or totally insufficient resources in terms of the aim of the alliance. Rather secondary criteria imply *sufficient* aspiration alignment or *sufficient* resource endowments to support market entry. The four different situations arising from categorizing

potential partners according to their resource endowments and their strategic aspirations are portrayed in table 1.

Table 1: Partner Selection Criteria and Alliance Categories

	<i>Great aspiration</i>	<i>Low aspiration</i>
<i>Strong resources</i>	(1) Attractive alliances	(2) Resource-based alliances
<i>Weak resources</i>	(3) Aspiration-based alliances	(4) Unattractive alliances

4. EVOLUTIONARY PERSPECTIVE ON PARTNER SELECTION CRITERIA

A firm will ally with another only if it foresees a probability of future strategically or financially benefits from the collaboration (Stuart, 1998). These benefits can stem from the resource endowments of the other firm or its aspiration to achieve a certain objective. The partner selection decision involves a comparative assessment of these two factors across potential allies. However, the importance of each criterion is likely to change over time. Linking motivations for forming alliances to each distinctive stage in a development process has not been undertaken (Rothaermel & Deeds, 2004). Similarly, no effort has been made to link motives to the product life-cycle. To account for these changes in criteria we utilize life cycle reasoning and a three-stage entry game with an early exploratory stage, an intermediate development stage, and a maturity stage (Williamson, 1975).

From the firm's perspective, initially when a market is formed it must decide on whether to enter, and if so, the timing of entry. When balancing the risks of premature entry and the costs of missed opportunities, the firms that value the net potential as high will have a stronger aspiration to enter than those who value it to be low (Lilien & Yoon, 1990). The underlying reason motivating entry, however, changes over the industry life cycle (Agerwal & Audretsch, 2001). Thus, deciding not to enter early in the life cycle does not imply that the firm will refrain from participating in market-entry-alliances before this stage for strategic reasons. For firms, contemplating on entering emerging markets, where allying is necessary for entry, it is important to avoid such alliance partners. Hence, in order to make appropriate partner selection decisions they must not only assess the resource endowments of potential allies but also understand how they will value the potential of entering and how this valuation may change over time.

4.1 Partner Selection Criteria in the Exploratory Stage

The early phase of an industry life cycle, when the market is still emerging, represents by definition a change from status quo. It is characterized by high degree of both technology and market uncertainty (Nelson & Winter, 1982) and requires product or service innovations from the firms participating in creating the market. Resources forming the basis for previous competitive advantages may not be valuable in the emergent market if changes are competence-destroying (Tushman et al., 1986) and hence uncertainty about what the right and what the wrong resources are prevails. Thus, early entrants face the risk of being displaced in the market, because of wrong or unlucky technical or market choices.

Under these conditions, there are three key reasons why aspiration levels may take precedence over resource endowments as criterion for partner selection. *First*, an emergent market represents a change from status quo, and firms that have been successful in the previous market may not want things to change. Thus, firms, which, as a result of their success, have strong resource endowments, may expend resources to deter entry and market development. They may do this by entering into alliances only to learn and to delay the development of the new market, so they can extract the remaining profits from the existing market. In addition, firms with strong resources may refrain from early entry and wait until initial uncertainties have been resolved because they are confident that they have the strength (such as financial resources for heavy marketing spending) to capture the market even in late entry. Strong firms can also seek to reduce risks by adopting an option perspective on entry decisions (Miller & Folta, 2002). While this may be advantageous for the firm in question, it is not in the interest of a potential partner, as it implies less than full commitment. *Second*, early entry involves risks due to high uncertainty about technologies and future demand and firms with strong aspirations are more inclined to take risky actions than firms with strong resource endowments. Firms with strong resource endowments often have a valuable brand name and hence have more to lose from taking risky actions than firms with no brand name. Sullivan (1991) found that because brand equity is a key resource for incumbents they tend to enter later than new-name brands. Moreover, extension of brands with large customer bases to new technical sub-field typically happens later than extension of brands whose base is small. *Third*, in the

early phase rapid adaptation to change is an essential competitive parameter. Firms with strong resource endowments may be unable to quickly adapt to change (Henderson & Clark, 1990) as they typically are large, which in general makes them less adaptable but also because they may have developed certain routines that are not easily adjustable (Nelson et al., 1982). Several authors argue that there is a negative correlation between weak resource bases and post-entry survival rates (Geroski, 1995; Helfat et al., 2002). However, this is not necessarily important as partners can function as “stepping-stones” by facilitating early entry and then being replaced over the course of the industry life cycle if desired. In sum, we argue that firms wishing to enter an emergent market should not choose its ally primarily on the basis of its stock of resources but rather on the degree and strength of aligned aspiration levels.

P1: In the exploratory stage the strength of aspiration levels is a more important criterion for partner selection than the strength of resource endowments

4.2 Partner Selection Criteria in the Maturity Stage

Firms contemplating on market entry in the maturity stage face a different competitive environment than the early movers. In the maturity stage technology and market uncertainty have been resolved and few changes take place in the market.⁴ Established customer connections stabilize the rate of change of market shares of the largest firms in the industry (Agerwal et al., 2001; Klepper, 1996), while reduced uncertainty intensifies competition between the firms in the market (Afuah et al., 1997). In this stage firms that remain on the market will be determined to stay, and as growth rated decline and some firms do better than others, some exits the market, not voluntarily but because they are forced to. Whereas product innovations and improvements of functionalities are important in the exploratory stage, in the maturity stage process innovations and cost reductions for the end-customers are central (Adner & Levinthal, 2001; Klepper, 1996). The maturity stage persists or is replaced by a decline phase where the demand decreases and may fall to zero.

⁴ Naturally the maturity stage ends with uncertainty as a new exploratory growth stage in an emergent market will replace it.

In such an environment firms with strong resource endowments may be better allies than those with strong aspiration levels. This is *first* because the market structure allows the strong firms to remain strong until the next disruptive change occurs (Klepper, 1996). Intensified competition among defined players makes resource strengths increasingly important. Notably, however, the strong firms in this stage are not necessarily the same as the strong firms in the exploratory stage. *Second*, the incentive to innovate is manifested differently for process and product innovation. Product innovations attract new buyers, and hence the incentive for product innovation is conditioned by the demand of new buyers. In contrast, process innovation, which is more important in this phase, typically lowers a firm's average cost of production and the value of such a reduction is proportional to the total output of the firm, the incentive to engage in process innovation is greatest for the largest firms (Klepper, 1996). Thus, it makes most sense for strong firm to engage in process innovation and thus thrive in this stage. In sum, the aspiration levels of firms in the maturity stage become a less important criterion for partner selection. Instead it is important to ally with firms that have the strength in terms of resources and capabilities to stay on the market.

P2: In the maturity stage the strength of aspiration levels is a less important criterion for partner selection than the strength of resource endowments

4.3 Partner Selection Criteria in the Development Stage

In between the exploratory and the maturity stages lies the development stage. In this phase the technical subfield has evolved and dominant designs and standardized technologies are emerging (Anderson & Tushman, 1990). Hence, given that a product succeeds and makes it to the development stage, uncertainty will be reduced compared to the growth phase but higher than in the maturity stage. This implies that the potential for seizing significant new market shares is reduced – yet not disappeared. At first, few firms will supply the products, but entry then expands as demand rises resulting in output increases and price falls. In the development stage the competitive imperative is neither market exploration nor market exploitation but staying in and developing the market. This does not eliminate the importance of product innovations, as the market still needs

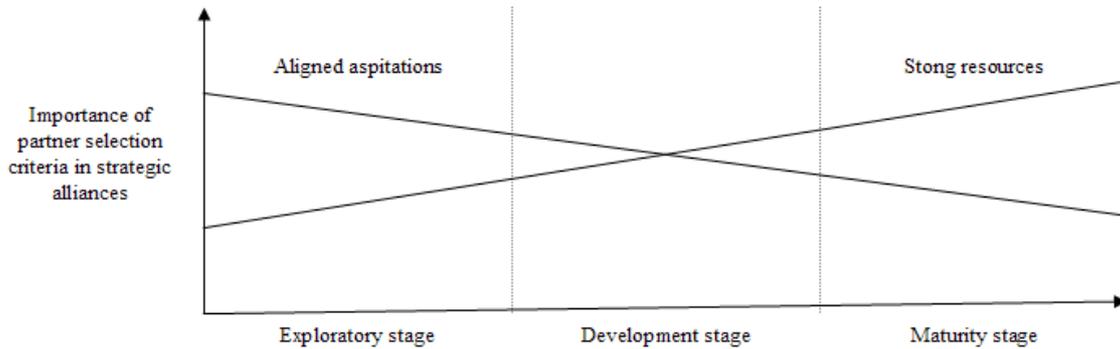
to be expanded, but in the particular subfield process innovations becomes relatively more important (Klepper, 1996).

In this competitive environment firms that are present on the market have proven their aspiration to enter the new subfield. Moreover, strategically slowing down market development through alliance participation is no longer possible. With limited threat of opportunistic alliance participation what becomes increasingly important is whether potential partners have the resource endowments to stay. Thus, while the relative high importance of aspiration levels decreases, the relative low importance of resource endowments in contrast increases. There may be both advantages and disadvantages associated with allying with strong resource-based firms versus strong aspiration-based firms in the development phase as success requires market expansion through product innovation as well as efficiency through process innovations, which the two types of firms are likely to support differently. As a result neither aspiration levels nor resource endowments take precedence, which may result in partner selection decision being based on alternative criteria.

P3: In the development stage the strength of aspiration levels and the strength of resource endowments assume equal importance for partner selection

Note that we do not claim that firms with strong resource endowments necessarily have low aspiration levels for market entry or vice versa. Our arguments only pertain to the *prioritization* of partner selection criteria. The above discussion and propositions are graphically summarized in figure 1.

Figure 1: The Relative Importance of Resources and Aspirations



5. MOBILE TELECOMMUNICATION MARKET

The mobile telecommunication market provides an ideal reference setting for assessing the validity of our arguments. The emerging market for data-intensive services emphasizes the necessity for cross-industry alliances involving network operators, handset manufactures, application developers and content providers to secure growing revenue streams. In addition, the market is technology-intensive and life-cycles are relatively easy to identify. We focus on the Western European market, which historically has been the world's most important mobile communication market - albeit Japan and South Korea lately have taken lead positions. Within this market we concentrate on alliances involving the two most influential segments: network operators and handset manufactures.

Provision of data-intensive services has been made possible through developments in the carrier technology, which facilitates network traffic and is the defining character of base stations and handsets. Carrier technologies have evolved through their first and second generation and the third generation is currently being rolled out in Europe. While the first and second generation was mainly used for voice and simple services, the 2.5G (GPRS) technology enabled provision of data-intensive services. 2.5G is merely a technological extension of 2G (GSM) and most handsets on the market were 2.5G compatible. 3G (UMTS) increases the bandwidth and speed in service provisioning, but it does not allow for significant new services, except video-telephony. Importantly, however, the technology differs from the previous and thus requires new handsets. Hence,

whereas 2.5G placed new demands on operators in terms of upgraded networks and on handset manufactures who have to offer new functionalities and user interfaces, 3G amplifies the requirements. This has created an unseen level interdependence among market players and forced particularly handset manufactures and network operators to form strategic alliances at an unprecedented pace. The greatest challenge is not the technology behind advanced handsets, but in making interoperable handsets and networks. Thus, extensive interoperability tests between each network and terminal manufacturer is among other things required.⁵

5.1 Operator and Handset Alliances

In this section we comparatively analyze the alliance strategies of two “flagship firms” (Whalley, 2004) in the European network operating market, the new entrant “3” and the incumbent Vodafone, in terms of their selection of handset manufacturing partners.

5.1.1 “3”’s Alliance Strategy

On October 2nd 2002, “3”, owned by Hong Kong based Hutchison Whampoa, launched its 3G services in the UK and became the first 3G network operator in the European market. “3” was a new entrant in the European market with no customers and no existing networks.⁶ It had an explicit strategy of being a first-mover in the new technical subfield of 3G, which differed from its competitors, who had postponed their launch due to technical errors and the lack of compatible handsets.⁷ Many competitors including Vodafone, O2, T-Mobile and Orange argued that the system did not work and that a premature launch would create bad publicity for the 3G market as a whole. “3” on the other hand hoped to achieve first-mover advantages and to sell their phones at high prices due to their initial monopoly position. The firm invested an estimated \$12 billion to buy 3G licenses in 10 countries in 2000-2001. Its European presence include Austria, Denmark, Ireland, Italy, the UK and Sweden, which should generate synergies through cross country work with

⁵ Global Telephony: “The Handset Bottleneck”, October 2001, 9/9, p. 31-32.

⁶ Some of the different “3” subsidiaries are formed with partners established in Europe and the mother-company Hutchinson Whampoa has previous experience from other telecommunication ventures in Europe e.g. the formation of Orange. However, these facts are less important here.

⁷ Børsen, September 10 2002.

try work with technology and infrastructure and the exchange of ideas for services and price models.⁸

As a network operator, “3” was not able to enter the market without partnering with handset manufactures that would develop compatible 3G handsets. However, incumbent handset manufactures in the European market were reluctant to launch 3G phones in accordance with the time schedule of “3”. Nokia for instance did not want to introduce a phone with video-calling facility and thus did not offer a way for “3” to distinguish its offerings as it pleased.⁹ Rather than allying with the European incumbents, “3” established close cooperation with US Motorola (July 2001) and Japanese NEC (August 2001) to facilitate the closely coordinated development of terminals and services for ensuring perfect compatibility. The firm did not dismiss the idea of having other handsets for their services but emphasized that the handset is an integrated part of the user experience and thus “3” would be very cautious with its partners.¹⁰ In April 2004, one and a half year after the first 3G phone was introduced to the market, “3” UK announced that it would be selling the first 3G phone from Nokia - the 7600. However, “3” and Nokia did not form a partnership and the 7600 was not exclusively offered to “3”. In May 2004, “3” in contrast allied with LG Electronics of Korea, which joined Motorola and NEC as preferred 3G handset providers. LG was to supply 3 million UMTS terminals to the “3” group by the end of 2004. The first videophone for LG Electronics produced exclusively for 3, LG U8110, was sold in Italy from May 2004. In 2004, “3” ordered around eight million 3G handsets from its three preferred providers and expects to buy 12 million handsets for 2005.¹¹

5.1.2 Vodafone’s Alliance Strategy

UK-based Vodafone is the world’s largest telecommunication company and one of the world’s largest firms by market capitalization. In October 2002, the same time when “3” marketed its 3G services, Vodafone launched its 2.5G service platform Vodafone Live!¹²

⁸ Financial Times, “The Wrong Call?”, December 4 2003, p. 21.

⁹ Financial Times, “The Finnish Company has Dominated Mobile Telecoms...”, May 7 2004, p. 17.

¹⁰ Børsen, April 8 2003.

¹¹ www.3gnewsroom.com, “Hutchison to order 12 million 3G handsets for next year”, September 12 2004.

¹² Interestingly, Utterback and Kim (1986) showed, innovations in an older technology may not come before the threat of the invading technology is a reality.

Three handsets were offered at launch: Sharp GX10; Panasonic GD87; and Nokia 7650. However, Vodafone surprised the industry by choosing Sharp, then a virtually unknown mobile brand in Europe, as the flagship handset provider. However, Sharp was more willing to cede to Vodafone's demands to produce a phone meeting its specific requirements. The strategy worked, with the Sharp phone becoming a top-selling handset in Europe in 2003.¹³ The Nokia handset was not emphasized in advertising and nor by analysts exemplified by CSFB that noted "The new Sharp and Panasonic terminals are a good start and Vodafone has said that a number of other new Vodafone Live! terminals are in the Pipeline" (Credit Suisse First Boston, 2002), leaving Nokia unmentioned. As a result the Nokia handset represented less than 20 percent of the sold Vodafone Live! handsets by November 2003 (Credit Suisse First Boston, 2003). In the summer 2003, Vodafone placed orders with several unnamed Japanese manufacturers for several millions 3G mobile phones, passing over the industry-leading Nokia, as Nokia models were not offering the features Vodafone wanted. The firm instead enlisted Samsung and Sony Ericsson to provide handsets for the service, but hoped to expand its range in the coming months.¹⁴

Vodafone spent \$23 billion acquiring 10 3G licenses in Europe. However, its CEO Mr. Sarin complained about the unavailability of 3G handsets at the 3GSM mobile summit in Cannes. He argued that Vodafone's 3G networks and services were ready, but it was continuing to wait for handsets that were not bulky, overheating or that had poor battery life. Thus, even though "3" in 2004 started having some success selling bulky 3G phones on cheap voice tariffs, Mr Sarin said Vodafone would wait until 3G handsets were "superior" to 2G as Vodafone could afford to disappoint its customers. Other leading operators voiced similar complaints that the devices did not match current 2G and 2.5G phones and all have indicated their full 3G launches will be delayed until.¹⁵ Nokia's CEO Mr. Ollila responded by saying that Nokia had suffered from a chicken-and-egg situation in its development of 3G handsets. It had to have three or four stable networks available to test the devices and the complexity of 3G meant the process had taken a long time. Not before May 2004 did Vodafone launch its first full 3G mobile services in Portugal and Germany. The firm developed strong relationships with handset manufactures

¹³ Financial Times, "The Finnish Company has Dominated Mobile Telecoms...", May 7 2004, p. 17.

¹⁴ BBC News, May 4 2004.

¹⁵ Financial Times, "Mobile Makers Return Fire in 3G Row", February 26 2004, p. 18.

including Nokia, Siemens, Ericsson, Motorola and Casio to ensure delivery of 3G mobile devices in various forms (Dodourova, 2003).

5.2 Resources and Aspirations of Handset Producers

The mobile handset market is rather concentrated as few firms dominate the industry at a global level and even fewer are controlling the European market. On a global scale Nokia, Motorola, Samsung, Siemens, Sony Ericsson, and LG Electronics accounted for 80-85 percent of worldwide sales in Q2 2004 (see table 2). Although the same firms dominate the European market, the picture differs as European handset manufacturers are much stronger in their home region than globally. Globally, the largest market shares are distributed among one European (Nokia), one American (Motorola) and one Asian (Samsung) firm, whereas the top three manufacturers in Europe – Nokia, Siemens and Sony Ericsson - all have European roots (see table 3).

Table 2: Global Quarterly Handset Market Shares 2002-2004

Year	Quarter	Nokia	Motorola	Samsung	Siemens	SEMC	LG	Others	Top 6
2002	Q1	36.7%	15.8%	10.6%	9.2%	6.4%	3.4%	17.9%	82.1%
	Q2	36.7%	17.0%	8.2%	8.4%	5.5%	3.8%	20.4%	79.6%
	Q3	36.3%	16.7%	11.5%	7.6%	4.9%	4.4%	18.6%	81.4%
	Q4	38.3%	18.3%	9.7%	9.2%	5.9%	3.9%	14.7%	85.3%
2003	Q1	37.6%	16.7%	13.2%	8.0%	5.4%	5.6%	13.5%	86.5%
	Q2	39.0%	15.0%	11.4%	7.7%	6.4%	5.0%	15.3%	84.7%
	Q3	36.0%	16.2%	12.0%	9.6%	5.7%	6.1%	14.5%	85.5%
	Q4	36.9%	14.9%	10.3%	10.1%	5.3%	5.9%	16.5%	83.5%
2004	Q1	31.7%	17.9%	14.3%	9.1%	6.2%	6.2%	14.6%	85.4%
	Q2	30.3%	16.1%	15.1%	6.9%	6.9%	6.6%	18.0%	82.0%

Source: Kaufman Bros Equity Research, 2004

Table 3: European Handset Market Shares 2002-2003

Year	Quarter	Nokia	Siemens	SEMC	Motorola	Samsung	Others	Top 5
2002	Q2	50.3%	13.4%	10.8%	9.8%	4.4%	11.5%	88.5%
2003	Q2	53.4%	13.2%	8.8%	8.4%	4.7%	11.5%	88.5%

Source: "European Mobile Phone Market Struggles as Nokia and Samsung Make Slight Gains", www.idc.com. September 5th 2003.

Nokia is by far the largest handset producer reaching a global market share of 39 percent and over 50 percent share in Europe. Nokia has several resources that make it an attractive partner including the largest installed base of customers, high brand awareness and value, highly developed and well-functioning distribution system, proven R&D and marketing skills, strong influence in terms of standard setting, and the financial resources to back almost any initiative. Credit Suisse First Boston noted that “With around 50% of the European handset market, Nokia’s support for new initiatives is crucial” (2002: 9). However, neither “3” nor Vodafone allied with the market leader, Nokia, when they entered the market for data-intensive mobile services. While Nokia had very strong resource endowments in the European market, it had no strategic aspiration to enter the market for 3G phones in the early exploratory stage or to customize 2.5G phones for certain operators. It was shipping large quantities of its 2G/2.5G “candy-bar” phones and would neither cannibalize its sales by offering alternative products nor jeopardize its market leader position by entering a new and immature technological regime. Moreover, the initial scale of the emerging 3G market was simply too small for Nokia to enter the market.

Siemens, with the second largest market share in Europe, formed a R&D alliance with Japanese Toshiba to develop 3G handset in 2000. However, in December 2001 Toshiba backed out of the deal.¹⁶ Instead Siemens agreed with Motorola that Motorola will make UMTS phones for Siemens in 2002 and 2003 based on Motorola’s A820 model until Siemens in 2004 should be able to produce its own handsets.¹⁷ In this regard Financial Times noted: “*This is a further sign that only a handful of companies are on target to supply 3G compatible handsets in any significant numbers this year*”.¹⁸ Siemens obviously lacked research and development capabilities to produce 3G handsets; however, it possessed other key resources such as local market knowledge and established distribution and marketing systems. Still, there has been no discussion about Siemens allying with an early moving network operator in the European market.

¹⁶ Europemedia: “Japanese Toshiba backs out on 3G Handset Deal with German Siemens”, December 6 2001.

¹⁷ Wireless, “Motorola Phones Dressed in Siemens’ Clothing”, April 22 2002, p. 14.

¹⁸ Financial Times, “Siemens to Resell Motorola Handsets”, April 16 2002, p. 28.

Sony Ericsson marketed its first 3G handset, the Z1010, in June 2004. Katsumi Ihara, president of Sony Ericsson, admitted it had experienced difficulties in stabilizing the hardware and software in what he refers to as a “*very complex new technology*”.¹⁹ Thus, again, the firm may have lacked advanced research and development skills but its strong presence and the associated competencies plus the unique combination of knowledge from the European and Japanese markets made it appear as a strong partner.

Comparatively, Motorola was a global leader in 1995 with a 60 percent market share. Yet, in 2003 its market share had dropped to 15 percent. It has been argued that Motorola failed because “*it misread consumer preferences, alienated telecom companies, and stumbled in developing new products*” (Tulsian, 2004). Motorola was the first handset manufacture to ally with “3”. For Motorola the partnership was a good way of pursuing its ambitious goal of increasing its European market share from 10 to 20 percent from 2003 to 2004. Motorola Nordic mentioned that “3” is highly prioritized, because “3” drives the Nordic 3G market.²⁰

Japan’s NEC was once a major player in Europe’s mobile market, but the firm was slow to build phones for the GSM networks that emerged in the 1990s. Consequently, NEC, which ranked sixth in units sold in Europe in 1995, saw its market share collapse, and pulled out of Europe.²¹ With little market share and a potentially large 3G market in Europe, NEC regarded allying with “3” as an attractive opportunity to penetrate the market. “*We hope 3G will allow us to become a top three player in the world again*” said Hideyuki Tsunoda, general manager of NEC's mobile terminals division. Jenny Nielson NEC’s Nordic marketing director commented that NEC has high expectations for the market, because it is among the first on the market.

Sharp did not have any significant presence in Europe before it allied with Vodafone. In April 2001, Sharp Telecommunications of Europe Ltd. was established in order to bring 2.5G Sharp GSM/GPRS mobile phones to the European market. Although Asian handset producers such as NEC and Sharp potentially had knowledge advantages in terms of 3G handset requirements from their home markets, a comparison with the European incumbents made them look as inadequate contesters. They basically lacked what was

¹⁹ Financial Times, “The Next Generation Finally comes of Age”, February 18 2004, Survey Edition, p. 1.

²⁰ Børsen, January 21 2003.

²¹ Wall Street Journal Asia, August 29 2002, p. 4.

considered the key resource-based advantages of Nokia such as locked-in installed customer bases, highly valued brand names, well-established distribution systems, proven marketing skills, and general knowledge of the European market.

Very limited information is available about the partner selection decisions in the development and maturity stages, as the market today is merely on the verge to the development stage. However, it is worth noticing that the strong European handset manufactures are now entering the 3G market. “3” offers both a Sony Ericsson and a Nokia handset but no alliance has been formed in terms of co-development, co-branding or exclusivity. Vodafone, on the other hand, entered the 3G subfield relatively late and immediately established close relationship with the strong handset manufactures in the market.

In sum, there appears to be a pattern in the entry decision within the European handset manufacturing market. Nokia, Siemens and Sony Ericsson generally appeared as the strongest firms in terms of resource endowments on the European market although Siemens and Sony-Ericsson may have had insufficient R&D skills in terms of 3G. However, it was Motorola, NEC and Sharp, all relatively weak firms in this market, which entered in the exploratory stage through partnering with “3” and Vodafone. The three weaker handset manufactures had strong strategic aspirations for entering the European market as their net potential gains were high. Thus, “3” through allying with Motorola and NEC and Vodafone through its alliance with Sharp in the very early stage of the industry life cycle were enabled to enter the market.

6. DISCUSSION

An essential but often neglected issue in strategic alliance research is the partner selection decision. Transaction cost economics emphasizes cost minimization as the rationale for strategic alliances, but Eisenhardt and Schoonhoven (1996) criticize the approach for its static efficiency focus and argue that an extended resource-based view is better capable of capturing the strategic rationales of interfirm collaboration. However, when it comes to explaining partner selection decisions, the resource-based perspective may be subject to similar criticism, as it focuses on static resource endowments of firms. Our explanation for partner selection links to the resource-based view. However, we extend the theory by

adopting an evolutionary approach and confront what we believe to be the key question in terms of partner selection: Should partner selection be based primarily on potential partners' resource endowments and secondly on their aspiration levels in terms of using these in certain ways, or should firms give primary attention to the aspiration levels and focus on the resource endowments secondly? The resource-base view, implicitly suggests the former by neglecting the aspiration issue. The reason for this may be that it implicitly assumes that aspirations are aligned in strategic alliances. Use of resources, according to original resource-based reasoning, involves internalization and not merely access to an external partner's resource base (Barney, 1986). When firms internalize resources, aspiration becomes less important, because a single entity remains. However, access to resources can be accomplished through strategic alliances (Grant & Baden Fuller, 2004), which preserves separate entities and also different strategic aspirations.

In answering the question, we develop three propositions from which theoretical implications and testable hypothesis can be derived. Key to the propositions is an evolutionary perspective purporting that it may at times be appropriate for a firm to ally with weak partners in terms of their resource endowments if its strategic aspirations are strongly aligned with the interest of the central firm. An interesting implication of our argument is that when aspirations of allies are aligned, bargaining power arguments lose importance. Thus, when firms choose to ally with firms, with whom they have common strategic aspirations, bargaining and opportunism problems should diminish. This is important as an increasing number of alliances involve links between smaller entrepreneurial firms and larger established firms (Doz, 1988; Miotti et al., 2003).

Generally, our case study supports that resource endowments are neither the single nor necessarily the most important criteria for partner selection decision in the exploratory stage. However, our findings tell little about criteria in the subsequent stages. Strong firms enter the market in the development stage but little allying takes place. We may suspect that it potentially is unnecessary to enter alliances in this stage, first, because coordinated market entrance is no longer required, but also because unstructured technical dialogue and overlapping problem solving (Clark & Fujimoto, 1991; Monteverde, 1995) is less vital due to the emergence of standards and modular interfaces (Robertson & Langlois, 1995). In the cases discussed it is difficult to evaluate the "appropriateness"

of the criteria for partner selection decisions as the performance of “3” and Vodafone’s alliance strategies is intricate to assess. First, because limited time has passed since the strategies were implemented. The market is still characterized by uncertainty and the performance implications may not have materialized yet. Second, there are no competitors to compare with. Both “3” and Vodafone has been criticized for their huge spending on 3G licenses combined with the slow service uptake in the market. Yet, lately many voices are recognizing that “3” is rapidly gaining market shares and has signed up 3.2 million subscribers globally. Also Vodafone’s Live! portal has recently experienced a significant uptake. However, whether “3” and Vodafone will benefit from their alliance strategies, and to which degree such benefits will also be available to later-entering competitors, remains to be seen. Thus, the results of this study are very indicative. Yet, we can conclude that by allying with partners with relatively weak resource endowments “3” succeeded in being the first-mover in the emergent market and is rapidly seizing market shares and Vodafone succeeded being the first operator to launch an extensive 2.5G service platform for data-intensive services.

Financial Times in a special report (December 5 2000) wrote: *“It is a measure of how far they have slipped that many of the leading Japanese and Korean manufacturers are choosing to team up with weaker European players to help crack the international market”*. This statement reflects a general fallacy, namely that allying with weak partners is necessarily a sign of weakness. We provide a framework emphasizing the changing relative importance of resource endowments and aligned aspiration levels in partner selection decisions. Yet, more work is needed to outline the specific relationship among these variables over time. Also the variables “resource strength” and “aspiration levels” need to be measured more stringently as we simplify our analysis by using market share and selected key resources to form a measure of resource strength and a firm’s potential net gains from market entry as a measure of the aspiration level. We also concentrate on dyadic relationships. However, in dyadic relationships there is more often harmony between private and common benefits as aspirations are relatively easy to align for the partners’ specific purpose compared to multifirm alliances. Thus, aspirations may have more importance in multifirm alliances than it is argued in this paper. Furthermore, we only present indicative empirical data from newspaper articles, case studies and financial re-

ports, which is not the kind of systemic investigation preferable. However, the tendency to form cross-industry alliances for entry in emergent markets is relatively new as it is often driven by digital convergence. This makes it difficult to take a more systemic approach, which would require a comparative assessment of the performance of alliances, where the firms involved deployed aspiration- and resource-based criteria for partner selection versus the performance of alliances that involved firms only focusing on resource endowments. However, many studies indirectly show that firms are not taking strategic aspirations properly into account when selecting allies. Thus, while it is a challenge to identify a sufficient number of firms deploying the two different methods to do empirical testing, we sincerely believe that current theory is inadvisable to use as guidance for managers in their partner selection decisions. Finally, we look at a particular industry in a particular geographical region. In order to assess whether generalization is possible future research should investigate partner selection criteria in different industrial and geographical settings.

7. CONCLUSION

Alliances may fail for a variety of reasons but a key factor influencing their performance is the partner selection. This is true even if the firm does not enter into an alliance, as partner selection works both to select the appropriate partners but also to dismiss the inappropriate (Makadok, 2001). So how should a firm decide on whom to ally with when entering an emerging market? Contemporary theory focuses on existing resource strengths and weaknesses of firms. Hitt et al. (2000: 464) argues that their resource-based explanation “*puts in another piece of the puzzle of international strategic alliances*”. This is no doubt true. However, correspondence between theoretical prescriptions and managerial practice does not solve the puzzle in terms of what firms *should do*. In fact, in the light of the high failure rate of strategic alliances, studies of what firms actually do may provide insight about what firms *should not do*. When alliance managers act in accordance with theoretical prescriptions, and alliance performance continues to be dissatisfactory, some pieces of the puzzle must still be missing. We find that the resource-based view offers a too simplistic approach to partner selection and that this approach may re-

sult in firms selecting inappropriate partners and dismissing the appropriate. We argue that critical resources are not *prerequisites* for alliance formation and may not even form the *primary* reason. Rather, we advance an evolutionary approach that includes an assessment of the importance of both resource endowments and aspiration levels over time. This approach implies that it at times actually may be beneficial for firms to ally with weak partners.

REFERENCES

- Adner, R., & Levinthal, D. 2001. Demand Heterogeneity and Technology Evolution: Implications for Product and Process Innovation. *Management Science*, 47(5): 611-628.
- Afuah, A., & Utterback, J. 1997. Responding to Structural Industry Changes: A Technological Evolution Perspective. *Industrial and Corporate Change*, 6(1): 183-202.
- Agerwal, R., & Audretsch, D. 2001. Does Entry Size Matter? The Impact of the Life Cycle and Technology on Firm Survival. *The Journal of Industrial Economics*, XLIX(1): 21-43.
- Ahuja, G. 2000. The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages. *Strategic Management Journal*, 21: 317-343.
- Anderson, P., & Tushman, M. L. 1990. Technological Discontinuities and Dominant Designs: A Cyclical Model of Technological Change. *Administrative Science Quarterly*, 35: 604-633.
- Ariño, A., & de la Torre, J. 1998. Learning from Failure: Towards an Evolutionary Model of Collaborative Ventures. *Organization Science*, 9(3): 306-325.
- Axelrod, R. 1984. *The Evolution of Cooperation*. New York: Basic Books.
- Balakrishnan, S., & Wernerfelt, B. 1986. Technical Change, Competition and Vertical Integration. *Strategic Management Journal*, 7(4): 347-359.
- Barney, J. 1986. Strategic Factor Markets: Expectations, Luck, and Business Strategy. *Management Science*, 32(10): 1231-1241.
- Barney, J. 1991. Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1): 99-120.
- Bleek, J., & Ernst, D. 1991. The Way to Win in Cross-Border Alliances. *Harvard Business Review*, November-December: 127-135.
- Brush, T., & Artz, K. 1999. Toward a Contingent Resource-Based Theory: The Impact of Information Asymmetry on the Value of Capabilities in Veterinary Medicine. *Strategic Management Journal*, 20: 223-250.
- Christensen, C. 1997. *The Innovator's Dilemma - When New Technologies Cause Great Firms to Fail*. Boston: Harvard Business School Press.
- Christensen, C., & Bower, J. 1996. Customer Power, Strategic Investment, and the Failure of Leading Firms. *Strategic Management Journal*, 17(3): 197-218.
- Chung, S. A., Singh, H., & Lee, K. 2000. Complementarity, Status Similarity and Social Capital as Drivers of Alliance Formation. *Strategic Management Journal*, 21: 1-22.
- Clark, K. B., & Fujimoto, T. 1991. *Product Development Performance: Strategy, Organization and Management in the World Auto Industry*. Boston, MA: Harvard University Press.
- Credit Suisse First Boston. 2002. Vodafone Live! What is it all about?, *Fatphone*: 12: Credit Suisse First Boston.
- Credit Suisse First Boston. 2003. Mobile Data Details from Operator KPIs: 12.
- Das, T. K., & Teng, B. S. 2000. A Resource-Based Theory of Strategic Alliances. *Journal of Management*, 26(1): 31-61.

- Dasgupta, P., & Stiglitz, J. 1980. Industrial Structure and the Nature of Innovative Activity. *The Economic Journal*, 90(358): 266-293.
- Dierickx, I., & Cool, K. 1989. Asset Stock Accumulation and Sustainability of Competitive Advantage. *Management Science*, 35: 1504-1511.
- Dodourova, M. 2003. Industry Dynamics and Strategic Positioning in the Wireless Telecommunications Industry: The Case of Vodafone Group PLC. *Management Decision*, 41(9): 859-870.
- Doz, Y. (Ed.). 1988. *Technology Partnerships between Larger and Smaller Firms: Some Critical Issues*. Lexington MA: Lexington Books.
- Doz, Y. L., & Hamel, G. 1998. *Alliance advantage*. Boston, Mass.: Harvard Business School.
- Dyer, J. 1996. Specialized Supplier Networks as a Source of Competitive Advantage: Evidence from the Auto Industry. *Strategic Management Journal*, 17: 271-291.
- Dyer, J., & Nobeoka, K. 2000. Creating and Managing a High-Performance Knowledge-Sharing Network: The Toyota Case. *Strategic Management Journal*, 21: 345-367.
- Dyer, J., & Singh, H. 1998. The Relational View: Cooperative Strategies and Sources of Interorganizational Competitive Advantage. *Academy of Management Review*, 23(4): 660-679.
- Eisenhardt, K. 1989. Building Theory from Case Study Research. *Academy of Management Review*, 14(4): 532-550.
- Eisenhardt, K., & Schoonhoven, C. 1996. Resource-based view of strategic alliance formation: Strategic and social effects in entrepreneurial firms. *Organization Science*, 7(2): 136-150.
- Geringer, M. J. 1991. Strategic Determinants of Partner Selection Criteria in International Joint Ventures. *Journal of International Business Studies*, 22(1): 41-62.
- Geroski, P. 1995. What do we know about entry? *International Journal of Industrial Organization*, 13: 421-440.
- Granovetter, M. 1985. Economic Action and Social Structure: The Problem of Embeddedness. *American Journal of Sociology*, 91(3): 481-510.
- Grant, R. M., & Baden Fuller, C. 2004. A Knowledge Accessing Theory of Strategic Alliances. *Journal of Management Studies*, 41(1): 61-84.
- Gulati, R. 1995. Social Structure and Alliance Formation Patterns: A Longitudinal Analysis. *Administrative Science Quarterly*, 40: 619-652.
- Gulati, R. 1999. Network Location and Learning: The Influence of Network Resources and Firm Capabilities on Alliance Formation. *Strategic Management Journal*, 20: 397-420.
- Gulati, R., & Gargiulo, M. 1999. Where do Interorganizational Networks Come From? *American Journal of Sociology*, 104(5): 1439-1493.
- Harrigan, K. R. 1988. Joint Ventures and Competitive Strategy. *Strategic Management Journal*, 9: 141-158.
- Helfat, C. E., & Lieberman, M. B. 2002. The Birth of Capabilities: Market Entry and the Importance of Pre-History. *Industrial and Corporate Change*, 11(4): 725-760.
- Henderson, R., & Clark, K. 1990. Architectural innovation: The reconfiguration of existing product technologies and the failure of established firms. *Administrative Science Quarterly*, 35: 9-30.

- Hennart, J.-F. 1988. A Transaction Cost Theory. *Strategic Management Journal*.
- Hennart, J.-F. 1991. The Transaction Cost Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States. *Management Science*, 37(4): 483-497.
- Hitt, M. A., Dacin, M. T., Levitas, E., Arregle, J.-L., & Borza, Q. 2000. Partner Selection in Emerging and Developed Market Contexts: Resource-Based and Organizational Learning Perspectives. *Academy of Management Journal*, 43(3): 449-467.
- Ireland, R. D., Hitt, M., A., & Vaidyanath, D. 2002. Alliance management as a source of competitive advantage. *Journal of Management*, 28(3): 413-446.
- Jones, C., Hesterly, W. S., Fladmoe-Lindquist, K., & Borgatti, S. P. 1998. Professional Service Constellations: How Strategies and Capabilities Influence Collaborative Stability and Change. *Organization Science*, 9(3): 396-410.
- Joskow, P. 1985. Vertical Integration and Long-Term Contracts: The Case of Coal-Burning Electric Generation Plants. *Journal of Law, Economics and Organization*, 1: 33-80.
- Kale, P., Dyer, J., & Singh, H. 2002. Alliance Capability, Stock Market Response and Long-Term Alliance Success: The Role of the Alliance Function. *Strategic Management Journal*, 23: 747-767.
- Klepper, S. 1996. Entry, Exit, Growth, and Innovation over the Product Life Cycle. *The American Economic Review*, 86(3): 562-583.
- Kogut, B. 1988. Joint Ventures: Theoretical and Empirical Perspectives. *Strategic Management Journal*, 9(4): 319-322.
- Koza, M., & Lewin, A. 2000. Managing Partnerships and Strategic Alliances: Raising the Odds of Success. *European Management Journal*, 18(2): 146-151.
- Li, S. X., & Rowley, T. 2002. Inertia and Evaluation Mechanisms in Interorganizational Partner Selection: Syndicate Formation among U.S. Investment Banks. *Academy of Management Journal*, 45(6): 1104-1119.
- Lieberman, M. B., & Montgomery, D. B. 1988. First-Mover Advantages. *Strategic Management Journal*, 9(Special Issue): 41-58.
- Lilien, G., & Yoon, E. 1990. The Timing of Competitive Market Entry: An Exploratory Study of New Industrial Products. *Management Science*, 36(5): 568-585.
- Lubatkin, M., Florin, J., & Lane, P. 2001. Learning Together and Apart: A Model of Reciprocal Interfirm Learning. *Human Relations*, 54(10): 1353-1382.
- Madhok, A., & Tallman, S. 1998. Resources, transactions and rents: Managing value through interfirm collaborative relationships. *Organization Science*, 9(3): 326-339.
- Mahnke, V. 2001. The Process of Vertical Dis-Integration: An Evolutionary Perspective on Outsourcing. *Journal of Management and Governance*, 5: 353-379.
- Makadok, R. 2001. Toward a Synthesis of the Resource-Based and Dynamic-Capability Views of Rent Creation. *Strategic Management Journal*, 22(5): 387-401.
- Masten, S., Meehan, J., & Snyder, E. 1991. The Costs of Organization. *Journal of Law, Economics, and Organization*, 7: 1-25.
- Miller, D., & Shamsie, J. 1996. The Resource-Based View of the Firm in Two Environments: The Hollywood Film Studios from 1936 to 1965. *Academy of Management Journal*, 39(3): 519-543.

- Miller, K. D., & Folta, T. B. 2002. Option Value and Entry Timing. *Strategic Management Journal*, 23: 655-665.
- Miotti, L., & Sachwald, F. 2003. Co-operative R&D: Why, and With Whom? An Integrated Framework of Analysis. *Research Policy*, 32: 1481-1499.
- Mitchell, W. 1989. Whether and When? Probability and Timing of Incumbents' Entry into Emerging Industrial Subfields. *Administrative Science Quarterly*, 34(2): 208-230.
- Mitchell, W. 1991. Dual Clocks: Entry Order Influences on Incumbent and Newcomer Market Share and Survival when Specialized Assets Retain their Value. *Strategic Management Journal*, 12: 85-100.
- Mjoen, H., & Tallman, S. 1997. Control and Performance in International Joint Ventures. *Organization Science*, 8(3): 257-274.
- Monteverde, K. 1995. Technical Dialog as an Incentive for Vertical Integration in the Semiconductor Industry. *Management Science*, 41(10): 1624-1638.
- Monteverde, K., & Teece, D. 1982. Supplier Switching Costs and Vertical Integration in the Automobile Industry. *The Bell Journal of Economics*, 13(1): 206-213.
- Nelson, R. R., & Winter, S. 1982. *An Evolutionary Theory of Economic Change*. Cambridge, MA: Harvard University.
- Nohria, N., & Garcia-Pont, C. 1991. Global Strategic Linkages and Industry Structure. *Strategic Management Journal*, 12(Special Issue: Global Strategy): 105-124.
- Park, S. H., & Ungson, G. R. 2001. Interfirm Rivalry and Managerial Complexity. *Organization Science*, 12(1): 37-53.
- Pfeffer, J., & Salancik, G. 1978. *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.
- Podolny, J. M. 1994. Market Uncertainty and the Social Character of Economic Exchange. *Administrative Science Quarterly*, 39(3): 458-483.
- Powell, W. 1987. Hybrid Organizational Arrangements: New Form or Transitional Development? *California Management Review*, 30(1): 67-87.
- Powell, W., & Brantley, P. 1992. *Competitive Cooperation in Biotechnology: Learning through Networks*. Boston MA: Harvard Business School Press.
- Powell, W., Koput, K., & Smith-Doerr, L. 1996. Interorganizational Collaboration and the Locus of Innovation: Networks of Learning in Biotechnology. *Administrative Science Quarterly*, 41(1): 116-145.
- Reinganum, J. F. 1985. Innovation and Industry Evolution. *Quarterly Journal of Economics*, 100(1): 81-99.
- Richardson, G. B. 1972. The Organization of Industry. *Economic Journal*, 82: 883-896.
- Robertson, P. L., & Langlois, R. 1995. Innovation, Networks and Vertical Integration. *Research Policy*, 24: 543-562.
- Rothaermel, F. T., & Deeds, D. L. 2004. Exploration and Exploitation Alliances in Biotechnology: A System of New Product Development. *Strategic Management Journal*, 25: 201-221.
- Saxon, T. 1997. The Effects of Partner and Relationship Characteristics on Alliance Outcomes. *Academy of Management Journal*, 40(2): 443-461.
- Schoenecker, T. S., & Cooper, A. C. 1998. The Role of Firm Resources and Organizational Attributes in Determining Entry Timing: A Cross-Industry Study. *Strategic Management Journal*, 19: 1127-1143.

- Schumpeter, J. 1934. *The Theory of Economic Development*. Cambridge MA: Harvard University Press.
- Singh, K. 1997. The Impact of Technological Complexity and Interfirm Cooperation on Business Survival. *Academy of Management Journal*, 40(2): 339-367.
- Spekman, R. 1988. Strategic Supplier Selection: Toward an Understanding of Long-Term Buyer-Seller Relationships. *Business Horizons*, 31: 75-81.
- Stuart, T. E. 1998. Network Positions and Propensities to Collaborate: An Investigation of Strategic Alliance Formation in a High-Technology Industry. *Administrative Science Quarterly*, 43(3): 668-698.
- Suarez-Villa, L. 1998. The Structures of Cooperation: Downscalling, outsourcing and the networked alliance. *Small Business Economics*, 10(1): 5-16.
- Sullivan, M. 1991. Brand Extension and Order of Entry. *Marketing Science Institute*: 91-105.
- Tushman, M. L., & Anderson, P. 1986. Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, 31: 439-465.
- Utterback, J., & Kim, L. 1986. Invasion of a Stable Business by Radical Innovation. In P. R. Kleindorfer (Ed.), *The Management of Productivity and Technology in Manufacturing*. Cambridge MA: Plenum Press.
- Walker, G., & Weber, D. 1984. A Transaction Cost Approach to Make-or-Buy Decisions. *Administrative Science Quarterly*, 29(3): 373-391.
- Walker, G., & Weber, D. 1987. Supplier Competition, Uncertainty and Make-or-Buy Decisions. *Academy of Management Journal*, 30(3): 589-596.
- Wernerfelt, B. 1984. A Resource-Based View of the Firm. *Strategic Management Journal*, 5: 171-180.
- Whalley, J. 2004. Flagship Firms, Consolidation and Changing Market Structures Within the Mobile Communication Market. *Telecommunication Policy*, 28: 161-175.
- Williamson, O. E. 1975. *Markets and Hierarchies*. New York: Free Press.
- Williamson, O. E. 1985. *Economic Institutions of Capitalism*. New York: Free Press.
- Williamson, O. E. 1991. Comparative Economic Organization: The Analysis of Discrete Structural Alternatives. *Administrative Science Quarterly*, 36(2): 269-296.
- Williamson, O. E. (Ed.). 1994. *Transaction Cost Economics and Organization Theory*. Princeton: Princeton University Press.
- Yin, R. K. 1989. *Case Study Research: Design and Methods*. London: Sage.