The Organizational Life Cycle as a Determinant of Strategic Alliance Tactics: Research Propositions

Yong-Sik Hwang
Sejong University, Korea

Seung Ho Park
Samsung Economic Research Institute, Beijing, China

This study investigates the determinant of strategic alliances according to an organizational life cycle framework. We suggest a different pattern of alliance formation and objectives across life cycle stages. The life cycle is characterized by four major stages: conception and development, commercialization, growth and stability stage. During the conception and development stage, alliance formation decisions will be framed in the context of accessing the capital resource and R&D activities. During the commercialization stage, alliances that concentrate on marketing, manufacturing and distribution are most likely to be successful. During the growth stage, alliance formation decisions will be framed in finding alliance partners that fit their asset specificity requirements and similar strategic scopes in order to achieve efficiency. During the stability stage, alliance formation decisions should be framed in the context of seeking alliance partners with complementary resources in order to gain diverse knowledge.

Introduction

Since the early 1980s, as the business environment has become more complex, strategic alliances have drawn much attention from researchers and practitioners. Rapid changes in modern technology have put firms in close contact with other firms in research and development, while free trade and globalization have forced firms to compete with one another in the borderless global market. These facts are reflected in the increasing alliance formation in recent years: The number of alliances in the United States has grown by more than 25 percent annually between 1997-2001 (www.research.ibm.com).

In high technology areas, capitalizing on strategic alliances enables companies to rapidly penetrate new marketplaces by accessing their partners' capabilities. At the same time, many firms use strategic alliances as a critical method of sustaining high performance. Strategic alliances help increase the rate of new product development, thereby enhancing a company's chances for survival and success (Deeds & Hill, 1996). Firms may enjoy certain advantages in terms of resource growth and firm survival if they can identify and exploit value-creating opportunities with alliance partners that possess complementary resources. In addition, strategic alliances have grown in significance, because they provide participants with credibility or legitimacy (Human and Provan, 2000). This is particularly true for entrepreneurial firms that form alliances with incumbent firms. Credibility and legitimacy allow entrepreneurial firms to access financial resources (Stuart, Hoang, & Hybels, 1999). Furthermore, strategic alliances help gain market power and the ability to move more quickly into new markets and

technologies (Hagedoorn, 1993). Firms can utilize their partners' established key linkages with customers, distributors, and suppliers.

Although it is evident that firms benefit from strategic alliances, little is known about why and how firms' alliance formation process progresses and changes. As firms evolve from one stage to the next, they may require additional resources to support growth. Firms use strategic alliances as an adaptive response to a changing environment (Park, Chen, & Gallagher, 2002). The present study introduces the organizational life cycle as a way to answer questions regarding how firms can use and structure alliances to adapt to organizational changes. The organizational life cycle framework describes the evolution of a firm, including its progressive stages of conception and development, commercialization, growth and stability. We find that this evolutionary perspective is useful in framing the process of strategic alliances: Each stage represents a unique strategic context that influences the nature and extent of a firm's external resource needs and resource acquisition challenges. Life cycle stages are clusters of issues or problems that each firm must resolve. Problems at each stage have unique demands and require an appropriate organizational structure, decision-making process, and strategy (Kazanjian & Drazin, 1990). Also, life cycle stages have been used as a contingency variable to study changes necessary for planning purposes in many firms.

Alliance Formation

Firms have several motivations to form strategic alliances. First, through interaction with other firms, a firm can combine its existing knowledge with external knowledge, thereby generating competencies and new knowledge. As it achieves the right combination of resources, a fit between partners is the foundation of successful alliances (Baum, Calabrese, & Silverman, 2000). Knowledge embedded within an organization has to be untangled, altered, and integrated with other knowledge resources to create growth. Firm-specific knowledge is created over time through complex interactions among firm resources, and that knowledge is the result of developing, carrying, and exchanging information through a firm's managerial resources (Amit & Schoemaker, 1993).

Second, a firm develops new competencies by accumulating knowledge from inter-organizational cooperation (Start & Podolny, 1996; Yli-Renko, Autio, & Sapienza, 2001). Skills and tacit knowledge are best transferred by cooperative arrangements with other firms. These exploration alliances should be based on seeking innovation, diversification, and access to new resources and competencies. Thus, a firm's internal resource growth evolves with its external relationships. As a firm builds on relationships with other firms, its resources build either on current resources or beyond current resources. This is mainly because resources move across organizational boundaries (Rosenkopf & Nerkar, 2001).

Third, a firm's positioning depends on with whom it forms strategic alliances. Social network theory suggests that a firm's alliance formation is affected by the social context in which the firm is embedded (Gulati, 1995). Therefore, forming the right cooperative relationships outside the firm can create "legitimacy" (Human & Provan, 2000; Stuart,

Hoang, & Hybels, 1999). Legitimacy refers to "the status and credibility of the network and network activities as perceived both by member firms and outside constituents like investors and customers" (Human & Provan, 2000, p. 328). Institutional theorists contend that legitimacy-building is crucial for organizational survival (DiMaggio & Powell, 1983). Since new ventures have no previous record within the network, there is a lack of assurance from customers, distributors, and suppliers as to whether the venture will grow and survive. Thus, new ventures with a lack of external networks face a credibility crisis.

The Organizational Life Cycle

Miller and Friesen (1980) found that organizational components are gestalts of variables that cluster together, and that organizational elements are likely to move together in clusters. Overall, there has been substantial agreement about the existence of a pattern of development in life cycle stages (Dodge, Fullerton, and Robbins, 1994). For example, the priorities of top management change with organizational life cycle stages (Smith, Mitchell, and Summer, 1985). The dominant problems perceived by managers tend to vary with life cycle stages (Kazanjian, 1988). Additionally, a link has been found between criteria for evaluating organizational effectiveness and life cycle stages (Quinn and Cameron, 1983). Innovation tends to increase during the early stages of a firm, and then slowly decrease during the later stages (Kimberly & Miles, 1980). Overall, previous literature has shown one common aspect of organizational life cycle stages: Organizational elements change with life cycle stages, and firms tend to have different needs and resources in different stages of the life cycle. When integrating numerous models of the organizational life cycle, in general there are four identifiable patterns of organizational life cycle stages: Conception and development, commercialization, growth, and stability (Kazanjian, 1988; Kazanjian and Drazin, 1990).

Conception and Development Stage

A new firm is characterized as young, small sized, and being dominated by the founder. Entrepreneurs need to turn their dreams into reality by developing business ideas, constructing prototype products or services, and selling their ideas to financial backers (Kazanjian & Drazin, 1990). The firm faces high uncertainty, both internally and externally. The primary focus of the conception and development stage is the creation of the idea for a new business.

Commercialization Stage

In the commercialization stage, the firm is focused on emphasizing sales, and gaining consumer acceptance in the market. As firms grow, entrepreneurs spend more time formalizing managerial processes and routines (Walsh & Dewar, 1987). For example, firms often need to formalize their manufacturing processes during commercialization. In this stage, functional organizational structures are created, and more authority is delegated. Even after gaining financial support from established institutions—venture capital firms, investment banks, and so on— firms' products or services need to acquire customer acceptance.

Growth Stage

As a firm enters the growth stage, its size becomes larger. Also, efficiency and productivity improve due to the accumulation of knowledge and skills. Thus, the formal structure of the organization is established. At the same time, as the organization achieves stable growth, the dominant problems at this stage include manufacturing in volume, manufacturing efficiently and with high quality and establishing market share.

Stability Stage

The organization enters the stability stage when growth rate slows. Its managers must decide whether to expand or keep the firm stable by sustaining or trying to enhance the present level of growth. Most firms plan the introduction of a second-generation product in order to boost growth rate (Kazanjian & Drazin, 1990). However, at this stage, an organization's rigid structures and resistance to change make it difficult to transform.

Alliance Formation and Organizational Life Cycle Phases

Propositions are developed around the organizational life cycle framework, linking life cycle stages with a firm's alliance formation. We identify specific alliance determinants that are likely to become more or less important as an organization evolves from one stage to the next. Each stage is associated with different resource needs and capabilities that can be used to attract partner firms.

Conception and Development Stage Alliances

Kazanjian (1988) found that a crucial problem in the conception and development stage is securing financial resources. Moreover, the major emphasis in the conception and development stage is on short-term survival, since short-term growth will bring more investment from incumbents and venture capitalists (Milliman, Von Glinow, & Nathan, 1991). It was determined that a start-up's alliance with a prominent partner brings a faster initial public offering (IPO) than does an alliance with a less prominent partner. Prominent incumbents elevate the reputation and legitimacy of a start-up firm. Since an entrepreneurial firm is relatively unknown to the corporate community, it may be evaluated by other firms based on the social standings of the business associations it has made (Stuart et al., 1999).

At the conception and development stage, firms focus on R&D activities to find new opportunities. In order to establish meaningful revenue streams, they need strong development technology at the outset. Exploration alliances involve discovering new ideas, innovating, and continuing basic research while building new capabilities and investments in the firm's absorptive capacity (Koza & Lewin, 1998). Hence:

> Proposition 1: During the conception and development stage, alliance formation decisions will be framed in the context of accessing the capital resource for organizational survival. Also in this stage, innovation is the key initiatives for alliance formation. Therefore, companies should concentrate on exploratory alliances such as R&D alliances. In addition, forming alliances with prestigious partners may help firms to build legitimacy and credibility for the future growth.

Commercialization Stage Alliances

Firms at the commercialization stage have not properly developed their marketing and distribution channels. For example, although firms in the biotechnology industry may have a prototype product, they need to obtain certain complementary capabilities such as manufacturing, distribution, and marketing skills. Many growing biotech firms seek partners that can provide downstream activities to the value chain (Rothaermel, 2001). Firms at the commercialization stage must then carefully evaluate their functional strengths and weaknesses to determine realistic resource growth objectives. For instance, forming alliances with established firms may allow growing firms to share stable distribution channels and customer bases. Therefore, most of the alliances at the commercialization stage are in the areas of manufacturing, marketing, and solving initial engineering difficulties. Thus:

> Proposition 2: During the commercialization stage, alliance formation decisions will be framed in the context of commercialization and accessing the distribution channel for organizational growth. Therefore, companies should concentrate on alliances in areas such as marketing manufacturing and distribution.

Growth Stage Alliances

As a firm enters the growth stage, the major internal focus is around issues of how to produce, sell and distribute the products in volume while attaining profitability. Incremental changes involve utilizing existing manufacturing techniques, using the same distribution channels, and marketing to similar groups of customers. As "experiential learning" characterizes, once a firm has assigned itself to a specific technology area, it is easy to achieve economies scale. According to Lane and Lubatkin's study (1998), the relevance of each partner's basic knowledge will be positively associated with efficiency building. Here, "basic knowledge" refers to a general comprehension of the technology upon which a company is based. Thus, firms at the growth stage begin to find alliance partners with productive equipment, market knowledge, and product development that involve specific assets. Therefore, we offer:

> Proposition 3: During the growth stage, alliance formation decisions will be framed in finding alliance partners that fit their asset specificity requirements and similar strategic scopes. Therefore, companies should be able to achieve efficiency in manufacturing and marketing activities.

Stability Stage Alliances

As the growth rate of stable firms slows, they begin to explore new areas, which require new knowledge and skills. Therefore, stable firms seek alliance partners from which they can learn new skills and access new resources. In an attempt to achieve long-term survivability, an incumbent may try to broaden its enterprise into unrelated areas. As new entrants come into the market, Schumpetrian creative destruction takes place. If stable firms expect to fail as a result of the creative destruction process, they use their financial and managerial resources to adapt to technological changes that threaten their dominance. Thus, firms at the stability stage strive to gain new technology through

forming new strategic alliances with partners of different strategic scope that can contribute to developing the radical new technologies. Overall, most mature firms are in need of complementary resources that can accomplish the partners' technological convergence.

> Proposition 4: During the stability stage, alliance formation decisions should be framed in the context of seeking alliance partners of complementary resources in order to gain diverse knowledge.

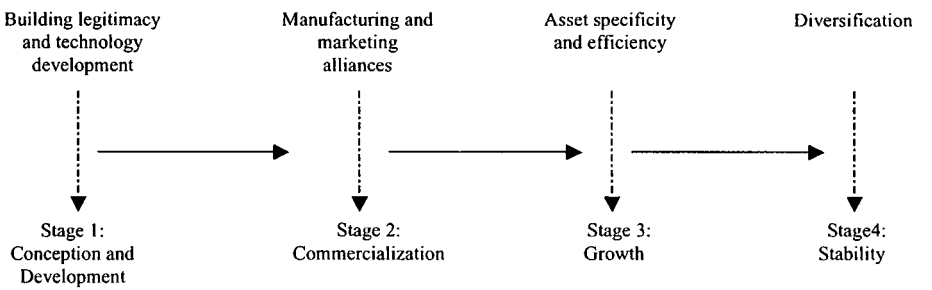
Exhibit 1 summarizes the overall alliance formation imperatives along the organizational life cycle.

Conclusion

This paper proposes the evolutionary process of alliance formation along the organizational life cycle. In other words, firms engage in alliances for different reasons across different stages of the organizational life cycle. This suggestion coincides with Doz's (1996) study on alliance evolution, which posits that firms' alliance formation evolves through a sequence of learning, reevaluating, and readjusting partners, then building commitment to certain partners. In sum, alliance formation in the conception and development stage suggests that start-up firms turn to alliances to overcome liabilities inherent in newness and to mitigate the high start-up mortality rate. Alliance formations in commercialization and growth stages imply that firms have an internal focus necessary to develop capabilities. Alternatively, at the stability stage, firms may become more aware of the risks and uncertainty; thus, they seek ways to utilize alliances for diversification.

Our findings offer valuable insights into alliance research and organization studies on life cycle models. The results suggest that it is crucial to incorporate the systematic effects of an organization's internal status to properly understand a firm's alliance behavior. It is generally supported that organizational changes affect a firm's alliance types and partner selections. These changes are primarily due to different motivations, goals, opportunities, and resource endowments at different stages of the life cycle. Overall, our findings

Exhibit 1. Organizational Life Cycle Phases Influence on Alliance Imperatives



confirm Miller and Friesen's study (1984) that any given phase of the life cycle carries a "gestalt" with it. As firms evolve from one stage to the next, they undergo interactive and iterative processes of learning, reevaluation, and readjustment to inter-organizational dynamics.

This research also offers a contribution to business practitioners, whose most urgent task is to make their firms grow and become stable. Over the past few decades, increasing numbers of strategic alliances have taken place. It has been discovered that the process of forming alliances is much more complex than originally and that few alliances are successful (Park & Ungson, 1997). By observing strategic alliance formation patterns through life cycle stages, it may be possible to predict major problems, help with decisions, and foresee opportunities associated with alliances.

While this paper proposes the effect of organizational life cycle on alliance formation, this research needs to be empirically tested. The area of organizational life cycle is still debatable since researchers question the intrinsic validity of life cycle stages. Based on observation, not all firms go through each life cycle stage. Some firms stay at the growth stage for a long time then dissolve. Some firms stay as mature companies for a long time and stay that way. Therefore, the purpose of the organizational life cycle is to understand a snapshot view of a firm's characteristics across different stages of growth.

References

Amit, R., & Schoemaker, P.J.H. (1993). Strategic assets and organizational rent. Strategic Management Journal, 14(1): 33-46.

Baum, J.A.C., Calabrese, T., & Silverman, B.S. (2000). Don't go it alone: Alliance network composition and startups' performance in Canadian biotechnology. Strategic Management Journal, 21: 267-294.

Deeds, D., & Hill, C.W.L. (1996). Strategic alliances and the rate of new product development: An empirical study of entrepreneurial biotechnology firms. Journal of Business Venturing, 11: 41-55.

Dimaggio, P.J., & Powell, W.W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48: 147-167.

Dodge, H.J., Fullerton, S., Robbins, J.E. (1994). Stage of the organizational life cycle and competition as mediators of problem perception for small businesses. Strategic Management Journal, 15: 121-134.

Doz, Y.L. (1996). The evolution of cooperation in strategic alliances: Initial conditions or learning processes? Strategic Management Journal, 17: 55-83.

Gulati, R. (1995). Social structure and alliance formation patterns: A longitudinal analysis. Administrative Science Quarterly, 40: 619-652.

Hagedoorn, J. (1993). Understanding the rationale of strategic technology partnering: Interorganizational modes of cooperation and sectoral differences. Strategic Management Journal, 14: 371-385.

Hitt, M.A., R. Hoskisson, & Kim, H. (1997). International diversification: Effects on innovation and firm performance in product-diversified firms. Academy of Management Journal, 40(4): 767-798.

Human, S.E., & Provan, K.G.(2000). Legitimacy building in the evolution of small-firm multilateral networks: A comparative study of success and demise. Administrative Science Quarterly, 45: 327-365.

Kazanjian, R.K. (1988). The relation of dominant problems to stage of growth in technology-based new ventures. Academy of Management Journal, 31: 257-279.

Kazanjian, R.K., & Drazin, R.(1990). A stage-contingent model of design and growth for technology based new ventures. Journal of Business Venturing, 5: 137-150.

Kimberly, J.R., & Miles, R.H. (1980). The Organizational Life Cycle, San Francisco: Jossey-Bass.

Koza, M.P., & Lewin, A.Y.(1998). The co-evolution of strategic alliances. Organization Science, 9(3): 255- 264.

Lane, P.J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. Strategic Management Journal, 19(5): 461-478.

Miller, D., & Friesen, P.H.(1984). A longitudinal study of the corporate life cycle. Management Science, 30: 1161-1183.

Milliman, J., Von Glinow, M.A., & Nathan, M. (1991). Organizational life cycles and strategic international human resource management in multinational companies: Implications for congruence theory. Academy of Management Review, 16(2): 318-339.

Park, S.H., Chen, R, & Gallagher, S. (2002). Firm Resources as moderators of the relationship between market growth and strategic alliances in semiconductors start-ups. Academy of Management Journal, 45(3): 527-545.

Park, S.H., & Ungson, G.R. (1997). The effect of national culture, organizational complexity, and economic motivation on joint venture dissolution. Academy of Management Journal, 40(2) 279-307.

Quinn, R.E., & Cameron, K.(1983). Organizational life cycles and shifting criteria of effectiveness: Some preliminary evidence. Management Science, 29: 33-51.

Rosenkopf, L., & Nerkar, A. (2001). Beyond local search: boundary-spanning exploration, and impact in the optical disk industry. Strategic Management Journal, 22: 287-306.

Rothaermel, F.T. (2001). Incumbent's advantage through exploiting complementary assets via interfirm cooperation. Strategic Management Journal, 22: 687-699.

Smith, K.G., Mitchell, T.R., & Summer, C.E. (1985). Top management priorities in different stages of organizational life cycle. Academy of Management Journal, 28: 799-820.

Stuart, T.E., Hoang, H, & Hybels, R.C.(1999). Interorganizational endorsements and the performance of entrepreneurial ventures. Administrative Science Quarterly, 44: 315-349.

Walsh, J.P., & Dewar, R.D. (1987). Formalization and the organizational life cycle. Journal of Management Studies, 24(3): 215-231.

Yli-Renko, H., Autio, E., & Sapienza, H.J. (2001). Social capital, knowledge acquisition, and knowledge exploitation in young technology-based firms. Strategic Management Journal, 22: 587-613.

Contact email address: psam@ceibs.edu