

The White Paper for The China-U.S. Relations Conference

New Venture Growth Strategies in China's High Technology Industries: Internal Growth vs. Alliances with Foreign Direct Investment

Haiyang Li, Ph.D.
Department of Management
Mays Business School
Texas A&M University
College Station, Texas 77843-4221
Tel: 979-845-8813; Fax: 979-845-9641
Email: hli@cgsb.tamu.edu

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1. General Description of The Area

New ventures play significant roles in economic and social development. In particular, the development of high technology ventures has been viewed as both a revitalization tool for developed market economies (e.g., U.S.) and a driving force for economic transformation in transition economies (e.g., China). Over the past two decades, China's economic transition from a centrally planned economy to a market economy has greatly stimulated economic growth, thus providing tremendous entrepreneurial opportunities. Over 20,000 new technology ventures have been incubated in the 53 national-level High Technology Science Parks in this country. Take Zhongguancun High Technology Science Park in Beijing as an example. Founded in 1988, this park is one of the most developed high technology industry parks in China. The core area of the Park is Zhongguancun in Haidian district. There are 68 universities and 213 research institutes within the Park. During the past 15 years, this Park has achieved significant growth in terms of number of ventures and industry sales. In 2003, for example, revenue in the park was US\$26 billion.

Prior research has noted that new technology ventures are highly vulnerable to environmental selection because they lack of adequate knowledge of their environments, new product experience, as well as managerial and financial resources. Thus, these ventures tend to have high failure rates. Empirical evidence shows that less than half of new ventures last for five years. Not surprisingly, a major stream of research in strategic management and entrepreneurship literature has focused on identifying the strategies that new technology ventures use to offset their liability of newness in order to improve their performance. However, most of previous studies have been done in the context of developed markets. We have very limited knowledge of how new ventures successfully grow in China's transition economy.

Generally, there are two strategic choices available for new venture growth: internal growth and strategic alliances. Internal growth of a new venture can be viewed as an attempt by its top managers to fully utilize these resources. For example, focusing on product innovation may help new technology ventures gain greater financial independence and enhanced their market performance to increase their performance. However, there is a limit to internal growth for new ventures because they tend to have limited resources. Particularly, compared with their counterparts in U.S., Chinese technology ventures are much more constrained by their limited financial resources as well as limited technical, managerial, and marketing capabilities. An alternative strategic choice is strategic alliance. A firm attempts to enter into alliances to obtain needed resources, learn new skills, and enhance competitive parity. Given that more and more multinational firms in the West are entering into this country, strategic alliances with the Western firms become a viable choice for Chinese technology ventures. However, there is also a limit to strategic alliances for new ventures. A venture's ability to enter into alliances with other firms is determined by its ability to attract potential partners. Such ability is reflected in the resources and other potential advantages that the firm is capable of offering to potential alliance partners. In addition, strategic alliances involve costs and they are not always good. For example, Chinese new ventures' alliances with the Western firms in the downstream activities (e.g., marketing and distribution) may divert their limited resources away from their own technological innovation. Also, because the legal framework has not been well established in China, the Western firms with proprietary technology may encounter the risk of opportunism of their Chinese partners in the alliance process.

We believe that further research in this line of stream is timely and of practical significance given the rapid growth of high technology ventures and increasing government effort to encourage the development of high technology industries in China. Results of this line of research would allow managers of new ventures to fully understand the roles of

different strategies in contributing to new venture growth. The findings of the study will also provide managerial insights for the Western firms who are attempting to get into the high technology industries through strategic alliances in China.

2. Benefits of Sino-US Collaboration

Research on strategies in China's transition economy faces several difficulties. For example, theories promulgated for developed economies may not be appropriate for China's economic transition. On the empirical side, researchers face sampling and data collection problems and difficulties in measuring firm performance. This is particularly true in the area of new venture strategies, where data for many new ventures are not available from the public sources. To advance this emerging research area, extensive collaborations between U.S. and Chinese organizations/scholars become very critical.

In Texas A&M University, we have a research team whose members have significant research experience on the subject matter. **Haiyang Li** (assistant professor of strategy and innovation management) has extensive research experience growth strategies of new technology ventures in China. He has been working in this area for 10 years and had close working relationship with his collaborators in Renmin University of China, Zhongguancun Science Park, and Xi'an Jiaotong University. He currently works on several research projects on product innovation and strategic alliances in Chinese new technology ventures. His papers from these projects have been published in the leading management and market journals such as *Academy of Management Journal*, *Strategic Management Journal*, and *Journal of Marketing*. **Lorraine Eden** (Professor and Texas A&M Faculty Fellow) has research interests in multinational firms (transfer pricing, international taxation and regional integration). She is working with Yichi Zhang from Peking University in China on a project regarding Chinese firms' foreign direct investment in the U.S. Her recent articles have appeared in *Academy of Management Journal*, *Accounting Organizations and Society*, *Asian Survey*, *Canadian Journal of Economics, Government and Policy*, *International Trade Journal*, *Journal of International Business Studies*, and *Journal of International Management*. **Michael Hitt** (Distinguished Professor of Management, Joseph Foster Chair in Business Leadership, C.W. and Dorothy Conn Chair in New Ventures) has extensive research experience in firm strategies in transition economies including China. Indeed, Michael Hitt and Haiyang Li are currently working on a project titled on "Firm resources and strategic flexibility in transition economies: A comparison between China and Czech Republic". Hitt's research also addresses how alliances can contribute to innovation. His work has appeared in the *Academy of Management Journal*, *Academy of Management Review*, *Strategic Management Journal*, *Journal of Applied Psychology*, *Organization Science*, *Organization Studies*, *Journal of Management Studies* and *Journal of Management*, among others. **Jonathan Brookfield** (assistant professor of management) has extensive research experience in foreign direct investment, political risks and business strategies, and clusters in Taiwan machine tool industries.

We have also built up research collaborations with top scholars in this area in China. These scholars include: 1) **Guoqing Guo** is a professor of marketing at Renmin University Business School in Beijing. His research focuses on marketing strategies in new technology ventures in China and product innovation. 2) **Xiaojuan Jiang** is a professor and head of Institute of Finance and Trade Economics at the Chinese Academy of Social Science in Beijing. She is an expert in foreign direct investment in China. 3) **Yichi Zhang** is an associate professor in the Guanghua Management School at Peking University in Beijing. His research focuses on global strategic management and management in technology firms in China. 4) **Yuan Li** is a professor and Dean of School of Management, Xi'an Jiaotong University in Xi'an. His research focuses on managing technological innovation and strategic

management in high technology industries. 5) **Jin Chen** is a professor of School of Business Administration at Zhejiang University in Hangzhou. He has extensive research experience in innovation and technology management in China.

Obviously, our potential collaborators, who are from the top universities/institutes in China, have extensive research experiences in this area. We believe that their insights and contributions to the development of this area are invaluable. Without the support of these local Chinese scholars, any research projects proposed in this area will be difficult to complete. More important, we have had collaboration experiences with these Chinese scholars before. The trusting relationship we have developed over the past few years is critical for the projects we propose here.

3. Collaborative Projects We Should Focus on

To better understand the growth strategies of new technology ventures in China, we believe that our future collaborative projects should address the following important questions:

- a) How do Chinese new technology ventures achieve market growth through internal growth strategies? How do they develop their managerial/marketing capabilities? How do they conduct product/technology innovation to improve their performance?
- b) How do Chinese new technology ventures achieve market growth through strategic alliances? How do they learn from their foreign partners? How do they build new learning and innovation capabilities for the future?
- c) What is the role of foreign direct investment in the growth of new technology ventures in China? How do the Western firms (e.g., U.S. firms) effectively manage their strategic alliances with Chinese technology ventures to obtain market growth in the Chinese market?
- d) What growth strategies have been adopted in the 53 national level High Technology Science Parks in China? How do their strategies differ from those in the U.S. Silicon Valley or Route 128? What can we learn from each other? What are the implications for public policy makers?

To successfully implement these potential projects, different types of collaboration should be considered:

- Joint workshop and annual meeting. It is important for project team members to meet annually to exchange their ideas and discuss the research progress. Such meets are very fruitful. For example, after the recent China-US relation conference, we are planning to publish a book on “Entrepreneurship and innovation in China’s high technology industries” based on the contributions of panel members in our roundtable discussion.
- Research forum. To disseminate our research results, a research forum on “New Venture Strategies in China’s High Technology Industries” could be launched. In the forum, scholars, industrial practitioners, and policy makers from both U.S. and China can meet together and exchange their ideas.
- Joint education program in high technology management. The first is that Texas A&M can develop a program to train Chinese scholars to do academic research in this area. The second is to offer management training for executives and employees in Chinese new technology ventures.