New Methods Of Locating Business Partners For Joint Development In Japan

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ABSTRACT

This article examines new methods for locating business partners for joint development of manufactured products in Japan. These methods, collectively called the Osaka Model, enable a company with outstanding technology capabilities to partner with a company that needs those capabilities. This paper also discusses what kind of environment should be created for encouraging the use of the model. A large network should be formed where the model is implemented, when successful, the relationship itself is a source of competitiveness of the area.

Keywords: Locating Business Partners; Joint Business Development; Technology Needs, Matching

1. INTRODUCTION

In this paper, new methods of promotion for joint development of products are examined. These methods, called the Osaka model, enable a company with outstanding technology to find a company that needs the technology. Using this model, a company locates a business partner, establishes a mutual trust and is then able to solve higher-level technological problems. Consequently, this model shares the strong points of both bid and conventional co-development.

Considerably less theoretical research has been done in the area of joint development. Professor Henry Chesbrough proposed open innovation as "a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology" (Chesbrough, 2003, p.xxiv). Many authors have developed this paradigm, including Christensen et al. (2005), Cooke (2005), Chesbrough (2006) and Chesbrough et al. (2006).

Takahashi and Takahashi (2011) presented joint development methods in Japan as the Osaka model and showed that the Osaka model and open innovation have similarities. However, with its diverse tactics for matching, the Osaka model is well-suited to the current business environment in Japan. Based on the Osaka model of Takahashi and Takahashi (2011), this article analyzes what kind of environment is appropriate for promoting joint development.

This paper is organized as follows. Section 2 explains the Osaka model's five methods. Section 3 discusses what kind of environment should be created to encourage the model. Section 4 is the conclusion.

2 THE METHODS OF LOCATING BUSINESS PARTNERS

For more than 10 years, the Japanese central government has been implementing policies of creating industrial clusters to promote joint development. The government often holds seminars, parties and matching sessions for companies and research institutes. Local government, the Chamber of Commerce and Industry, and non-profit organizations also hold similar events. As a result, several new technology and new products are developed. However, these partnerships, and, as a result, new developments, do not occur frequently.

We suggest that creating opportunities for firms to meet is not enough. The technology needs to fit the seed. The Osaka model uses the following five methods to achieve the appropriate matching of technological seeds and technological needs (Takahashi and Takahashi, 2011).

Presenting technological seeds to the public with websites

OMRON Corporation, whose main research institute is near Osaka, has opened its technology seeds to the public through its websites since 2000 to find joint development business partners. Although universities, public research institutes, and SMEs (small and medium-sized enterprises) sometimes release such technology seeds, large firms such as OMRON rarely do. Releasing technology seeds to the public takes courage because doing so exposes the technology's existence and potential to other companies who may exploit it. However, one major reason that OMRON does release its technologies is that it mainly manufactures parts, rather than final products. Parts manufacturers must encourage potential customers to be aware of their technologies' advantages.

Business matching by experienced engineers

Business Innovation Center Osaka, which is managed by an extra-departmental body of the Osaka Municipal Government, has developed the Business Chance Doubling Project. In this project, 50 "matching navigators," experienced engineers who have retired from large manufacturing companies, visit small- and medium-sized manufacturing enterprises in Osaka City, and identify existing technology seeds and needs. They are well-connected and have in-depth knowledge of a specific technological field.

In the matching navigators' monthly meeting, some navigators present to the others the technology seeds and needs of SMEs they visited, and then they explore potential new transactions or joint development projects between those SMEs and other firms using navigators' personal connections.

From 2002 to 2005, navigators had visited nearly 2,000 enterprises, resulting in 671 deals, totaling US$20 million. The more company data they accumulate, the more easily and efficiently they make matches. This means that the method is a success.

Offices on specific themes such as robot production

The Robot Laboratory, managed by an extra-departmental body of the Osaka Municipal Government, is a multipurpose facility for robots and hosts consulting sessions, meetings, lectures, presentations of technology seeds and needs, and many other activities. This office is a type of salon, where any individual or firm interested in robots comes to exchange information. Robots are complex combinations of various technologies, so such a place is useful.

This office has two roles. First, it promotes matching. Because the office is concerned with robots, its visitors have clear technology needs and seeds, making matches among visitors easier. Second, it promotes the creation of unique ideas and helps establish the basis for trust. The exchange of ideas sometimes generates unique ideas, which are keys in the search for reliable business partners.

Transactions promoted by government-sponsored joint research projects

In Kumamoto, the western part of Japan, its prefecture government organized a joint research project in semiconductors from fiscal year 1999 to 2003 in which several semiconductor companies participated. The central government granted about $13 million to the project. Semiconductors were chosen as the theme of the joint research project because more than 300 semiconductor-related firms were in Kumamoto Prefecture. Some large firms in Tokyo decided to participate in the project. Thus, a joint research project began between firms in Kumamoto and Tokyo. In this project, firms noticed one another's technology needs. After the joint research project ended, one of the Kumamoto firms began transactions with the Tokyo firms.

Presenting technological needs to the public

In 2005, Matsushita Electric Industrial Co., Ltd. (now Panasonic Corporation) held a meeting with 30 SMEs in Osaka to explain what type of technologies Matsushita needed. For its part, Matsushita was seeking technology seeds that matched with its technology needs, and the meeting gave SMEs an opportunity to sell their technologies to Matsushita.

Figure 1: Classification of inter-business transactions in the manufacturing industries in Japan

		Product architecture	
		Integral	Modular
Inter-business relationship	Closed	Conventional joint development	
	Open	Osaka Model	Spot transaction

Source: Takahashi and Takahashi (2011) Figure 1.

We explained the five methods of the Osaka model. Contrary to conventional inter-business transactions, the Osaka model is classified in the open/integral[1)] quadrant in the Figure 1 matrix. A firm implementing the model seeks business partners in broad domains. Therefore, firms maintain open inter-business relationships to seek partners. Once they find partners, they create intense cooperation with each firm and conduct joint development of integral-type products. Thus, this model promotes new partnerships for developing integral-type products using open inter-business relationships.

3 THE ENVIRONMENT OF ENCOURAGING THE OSAKA MODEL

In this section, we discuss what kind of environment promotes the model.

Based on the above analysis, we think that making a database of technological seeds encourages the Osaka model. A simple database is not very useful. A database in which each technological seed has been already arranged with technological needs helps match them. If such a database becomes shared knowledge, joint development would be promoted.

Putting technical seeds or needs in the public may help rivals, so companies release their technical seeds or needs only when the benefits outweigh the harm. This would be realized if plenty of information goes to the companies and then joint development easily occurs. Networks of companies or people would encourage such joint development.

Therefore, a large network should be formed in the area where the model is implemented.[2)] A network helps transfer information. What's more, today, how we select information is as important as how we get it. That is, among a range of information, we have to choose necessary and reliable sources. For this purpose, a network is useful. To create this kind of network, we need connections. If connections spread throughout an area, the well-connected relationship itself is a source of competitiveness of the area.

The formation of networks necessitates long-term perspectives; supporting each other in an area will benefit all involved in the long run. Hence, trust has an important role in forming networks. "It facilitates the exchange of resources and information that are crucial for high performance, but difficult to value and transfer via market ties" (Uzzi, 1996, p.678). However, it is not easy to create trust. Mr. Tatsuro Ichihara, Chief Executive Director of Kyoto Nano-technology Cluster Office, said that meeting once is not enough; you need to meet more. Trust is established through formal and informal meetings. In addition, "it is impossible to create trust in a short term. We need to pile up daily exchanges for a long time" (Dono, 2005, p.34). Therefore, we have to conduct steady and prolonged exchanges between firms or people, creating trust. If these activities evolve into an area-wide huge network, and if fierce competition and cooperation occurs, the area becomes a cluster.

[1)] "A modular architecture includes a one-to-one mapping from functional elements in the function structure to the physical components of the product, and specifies de-coupled interfaces between components. An integral architecture includes a complex (non one-to-one) mapping from functional elements to physical components and/or coupled interfaces between components" (Ulrich, 1995, p. 422).

[2)] In Osaka, there are many networks; joint industry-university projects, exchanges of small and medium-sized enterprises from different industries, and organization on an individual base.

4 CONCLUSIONS

We discussed the Osaka model and how to encourage it. In the Osaka model, a company with a unique need for innovative technology finds a company whose technology fulfills that need. To find such partners, they use diverse tactics including opening their technology needs or seeds to the public, using matchmakers, and using offices that create opportunities for meetings. They solve high-level technological issues in a corporate manner.

We also concluded that a large network should be formed in the area where the model is implemented. If connections spread in an area, the well-connected relationship itself is a source of competitiveness in the area.

The Osaka model has a large potential for promoting joint development. This model can be implemented in any country. The cost of implementation of each method is not high, so governments and non-profit organizations don't need large expenditures. If you can hire several experienced engineers, you can use the methods. The model is appropriate to promote the manufacturing industry, especially in developing countries, where joint development is comparatively inactive.

In addition, the Osaka model suggests a change of culture is needed. The new culture will bring active exchanges among highly motivated people and the extension of connections. When this kind of culture is created and joint development happens actively, the area will be a cluster.

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