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## Participation of Intellectual Property Management Department in Mergers and Acquisitions: An Exploratory Study

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### Abstract

*Intellectual Property (IP) management department is advised to be involved in the process of Mergers and Acquisitions (M&A) in order to manage IP properly in the process of M&A in the previous reports. We conducted an explanatory study to examine the participation of IP management departments in Japanese firms in the process of M&A, by a questionnaire survey. We delivered the questionnaire relating to the participation of IP management departments in the M&A process to 60 R&D-oriented firms. As a result, no significant differences in importance for nine of 10 IP management issues were found among the cases of M&A for different purposes and we found that IP management departments should be more involved, especially in the early stages of M&A. It is recommended that they manage their participation in accordance with the steps of the M&A process.*

**Keyword:** Intellectual property management, Japanese firms participation of IP management department, Mergers and acquisitions, R&D-oriented firms, the steps of M&A process

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### Introduction

Japanese firms have been using mergers and acquisitions (M&A) as instruments to survive in global competition, like other firms in the world. The number of M&A of Japanese firms increased rapidly until 2006 and is now gradually decreasing.

The purposes of M&A are an enlargement of share or scale in business or market, obtaining resources of which the firm is short, including technology and intellectual property (IP); diversification of business; and so forth. Intellectual property management has become increasingly important for firms to achieve a competitive advantage. Regarding IP management in M&A in particular, there have been some discussions about the role of an IP management department in M&A (Report on the International Patent Licensing Seminar, 2009; Kamiyanagi, 2008). After M&A, the new firm manages IP. Especially in cases of M&A for obtaining resources, including technology and IP, a consolidated firm should evaluate the patent rights of the partner firms as resources, in order to direct them to effective output of research and development (R&D). The IP management department in a pharmaceutical firm has to deal with many issues relating to IP during and after their M&A (Okumura, 2010).

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We conducted an explanatory study to examine the participation of IP management departments in Japanese firms in the process of M&A. We propose issues of IP management in the process of M&A and steps of M&A for participation of IP management department.

## **Literature Review**

### ***IP Management Department***

The IP management departments of firms are responsible for both internal management of IP, such as patent applications, confidentiality and IP awareness; and external management of IP, including licensing patent information and litigation (Pitkethly, 2001). Nowadays, management of IP includes a) assessing, measuring and auditing IP portfolios; b) valuation of IP; and c) managing of IP assets in a manner that involves more than just protecting and enforcing IP (Hanel, 2006; Xu, 2004).

Then, the IP management departments are defined as a department of a firm, which deal with internal and external management of IP and IP rights, that is, patents, trademarks, copyrights, trade secrets and so forth, and manage firms' IP, including protecting and enforcing of IP; assessing, measuring and auditing of IP portfolios; valuation of IP; and managing of IP assets.

### ***The Process of M&A***

IP is highly involved in the due diligence and IP integration project process of the M&A process (Combs and Yates, 2007; Robins, 2008; The First Sub-committee of the Second Intellectual Property management Committee, 2009). The proposed roadmap framework for an integrated IP management approach in the M&A process consists of four phases: IP strategy; IP due diligence; IP risk management and IP integration planning; and IP integration (Farhadi and Tovstiga, 2010).

The process of M&A advances from the planning of the M&A strategy, as the first step, to integration in the end. In general, the process includes the following seven steps:

- 1) Planning of M&A strategy
- 2) Screening of target firms
- 3) Basic mutual agreement
- 4) Due diligence
- 5) Final mutual agreement
- 6) Arrangement before integration
- 7) Integration

In the above process, post-merger integration (PMI) is usually defined as step seven. Sometimes, it covers steps from 5 to 7 or, more broadly, steps 3 to 7 (Matsue, 2006)

### ***The Purposes of M&A***

M&A can serve as an effective channel for technological restructuring or for strengthening technological core competencies. M&A can also be used by firms to enter new technology markets (Frey and Hussinger, 2006). There are M&A cases where the obtainment of IP assets is the main purpose (Bryer and Lebson, 2003).

The comprehensive purpose of M&A is deemed to be the "improvement of firm value" and, more specifically, this can include: a. seeking scale merit by an enlargement of share or scale, b. creating a way to enter a new field of business, c. the enlargement of the scope under a firm's control by vertical integration. The purposes of M&A are mainly grouped into the following

three categories:

- 1) Enlargement of scale (merger)
- 2) Obtaining technologies (without movement of personnel)
- 3) Obtaining new business (including personnel or equipment)

(The Third Sub-committee of the Second Intellectual Property Management Committee, 2011)

## Methodology

### Interview Study

We conducted an interview study at four Japanese pharmaceutical firms and two Japanese electronic equipment firms, all of which experienced more than one M&A.

Among the queries in these interviews, the purpose of M&A was included. As a result, we grouped "obtaining technologies" (category 2 above) as part of "strengthening of business field", which includes obtaining technologies or IP. Through our interviews, we also noted that there are M&A cases which purposes are complex and cannot be clearly grouped into the above three types. We inquired about the steps in the M&A process and learned that there are two types of IP management involved; one is for IP in general, and the other is specifically for patents. Questionnaires relating to IP management issues are derived from an analysis of words gathered from the interviews.

### The Questionnaire

We selected 60 samples from Japanese R&D-oriented firms, which rank as the top 60 manufacturers with regard to patent applications filed with the Japan Patent Office and R&D expenditures in 2008, the period for which the data is available.

The questionnaire was delivered to these 60 firms by mail in August, 2011. Twenty-three responses (from October, 2011 to January, 2012) were obtained (response rate: 38.3%). The questionnaire was addressed to IP management department managers. Table 1 shows the respondent characteristics, revealing that manufacturers of varied industries are included.

**Table 1: Characteristics of Respondents**

Industry	Number of firms
Pharmaceuticals	3
Transportation machinery	2
Electric machinery	5
Information and communication technology	1
Oil, coal, plastic and ceramics	1
Chemical industry	1
Steel, nonferrous metal	1
Business machinery and instruments	1
Plural industries	2
Others	3
Total	23

*Participation of Intellectual Property Management Department in Mergers and Acquisitions: An Exploratory Study*

We constructed a questionnaire from the viewpoints of the process and the purpose of M&A. The questionnaire is composed of two types of inquiry: The first included 10 questions relating to the importance of IP management issues before, during and after M&A, and a question regarding the number of M&A involved and their purposes. The answers to these 10 questions relating to the importance of IP management issues were analyzed on the five-level Likert scale (from 1: "not important at all" to 5: "extremely important").

The other inquiry included 11 questions relating to the importance of participation in the steps of the M&A process and actual action taken by the IP management department. We divided the M&A process into 11 steps. The answers to these questions were analyzed on the five-level Likert scale for importance (mentioned above) and for actual action taken (from 1: "not carried out at all" to 5: "sufficiently carried out").

## Results

**Table 2: Evaluation Results of IP Management Issues in M&A**

Issues of IP management	Evaluation value of importance (Av.) (grouped by purposes of M&A)			
	Enlargement of scale (n=10)	Strengthening of business field (n=4)	Obtaining new business (n=2)	Complex or unknown (n=13)
Obtaining information on partner firm's patents in advance of M&A	4.0	4.5	5.0	4.5
Evaluating partner firm's patent value in advance of M&A	4.1	4.5	5.0	4.5
Obtaining information on partner firm's patent rights licensing in advance of M&A	3.9	4.3	5.0	4.6
Restructuring IP department personnel after M&A	3.1	2.8	3.0	3.6
Standardizing IP management method after M&A	3.3	2.5	2.5	3.5
Increasing or decreasing the number of patent applications or rights after M&A	3.0	2.3	2.5	3.5
Standardization in obtaining patent rights after M&A	2.8	2.5	2.5	3.4
Global strategy for patent after M&A	3.4	2.5	3.0	3.9
Standardizing the degree of involvement by or control of law/patent firms after M&A	2.9	2.3	3.0	3.4
Treatment of IP clauses in licenses of partner firms with co-developer or co-marketer	3.7	3.8	4.5	4.2

### Purposes of M&A

The results of the questionnaire show the number of cases for each purpose of M&A was as follows: 10 for “Enlargement of scale”, four for “Strengthening of business field”, two for “Obtaining new business” and 13 for “Complex or unknown purposes”.

### Evaluation of IP management Issues in M&A

Table 2 demonstrates the results of the questionnaire relating to importance of IP management issues before, during and after M&A. The Cronbach’s  $\alpha$  value (0.914) exceed 0.8. It can be said that the issues in the questionnaire are reliable.

No significant differences in evaluation values of importance of nine issues among the cases for different purposes were found. Only the difference in evaluation values of importance of the issue: “Global strategy for patents after M&A” between the cases for “Strengthening of business field” and “Complex or unknown”, was revealed to be significant (with a significance level of 5%, Wilcoxon signed-rank test).

Higher values in evaluation of importance for all purposes of M&A were found for three issues in advance of M&A; that is, “Obtaining information on partner firm’s patents”, “Evaluating partner firm’s patent value” and “Obtaining information on partner firm’s patent rights licensing”. “Treatment of IP clauses in licenses of partner firms with co-developer or co-marketer” was also highly evaluated for all purposes of M&A.

### Participation of IP Management Departments in the Process of M&A

Table 3 demonstrates the average value of evaluation for importance and actual action taken in each step throughout M&A.

Regarding the importance of participation in “M&A strategy”, “Target screening” and “Due diligence process” were evaluated as higher than the average value. As for actual action taken, the evaluation was lower than the average value in three steps: “M&A strategy”, “Target screening” and “Department meeting with partner’s department”. This revealed that participation in the M&A strategy and target screening, that is, participation in the early stages of M&A, is evaluated as very important, but is not sufficiently carried out.

**Table 3: Importance and Actual Action taken by IP Management Department**

Steps of M&A	Importance (n=23)	Actual action taken (n=23)
M&A strategy	4.35	3.53
Target screening	4.35	3.41
Negotiation of basic mutual agreement	4.22	4.00
Reaching basic mutual agreement	4.22	4.00
Due diligence process	4.57	4.24
Negotiation of final mutual agreement	4.13	4.00
Reaching final mutual agreement	4.13	4.00
Arrangement for preparation before integration	4.04	3.82
Integration	4.17	3.88
Activity in IP department after integration	4.13	3.88
Department meeting with partner’s IP management department	4.22	3.71
Av.	4.23	3.86

[The five-level Likert scale for importance (from 1: “not important at all” to 5: “extremely important”) and for actual action taken (from 1: “not carried out at all” to 5: “sufficiently carried out”)]

The importance and actual action taken is also demonstrated as to be recognized differently in each step of M&A. As for basic or final mutual agreement, the importance and actual action taken are evaluated as being the same for the negotiation and reaching of mutual agreements.

### **Discussion**

The results of this study shows that, for all purposes of M&A, three IP management issues in advance of M&A (obtaining information on a partner's patents and on a partner's patent rights licensing, and evaluating a partner's patent value) are evaluated as highly important. As to steps of M&A, the results show that the steps can be divided into nine among eleven steps, which we proposed in the questionnaire. Then, the results show that, although participation in the early stages of the M&A process are evaluated as more important, actual action is not carried out sufficiently. This suggests that IP management departments recognize the importance or necessity of their involvement in advance of M&A, or in the early stages of M&A, but it is difficult for them to participate in practice. These were not demonstrated specifically in the previous papers. This may be caused by insufficient M&A information in advance, or a lack of leadership in the IP management department in the M&A process

### **Concluding Remarks**

This study attempts to understand how the IP management departments of Japanese manufacturers are involved in the M&A process. We propose 10 issues of IP management in the M&A process to be managed by IP management department. Also, we grouped steps of M&A relating to participation of IP management department and propose nine steps. It is demonstrated that their evaluation of the importance of their involvement and their actual participation differ in each step of M&A. It is recommended that they manage their participation in accordance with the steps of the M&A process and positively participate in the early stages of M&A or appeal for their participation to the upper management of their firms in advance. This study is an exploratory one; hence the study should be further explored in details by a case study or the study should be explored in other countries or for other manufacturers that have experienced many domestic and cross-border M&A.

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Tomoko Saiki and Seiya Shimanuki

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### Biography

Tomoko Saiki is a Professor at Graduate School of Innovation Management, Tokyo Institute of Technology. She graduated from Osaka University with a Bachelor's degree in Pharmacology in 1970 and a Master's Degree in Pharmacology in 1972. She joined the Japan Patent Office in 1972 and is a former Director of Medical Science Division. She joined FANCL Corporation in 2000 and is a former General Manager of Intellectual Property Management Department.

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