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Are Mergers and Acquisitions
Going to Be Popular in Japan Too?:
An Empirical Analysis

by

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Abstract

One of the unique features of the Japanese management has been the preference of internal growth to mergers and acquisitions (M&A) as the means to attain growth. This may be attributed to the organizational and motivational systems that are different from the American systems, such as the different employee and management attitudes and the different pattern of stock ownership. It has been observed, however, that more Japanese firms are now engaging in M&A than before. This recent 'wave' in the M&A activity is studied using the sample of 232 M&As -- mergers, acquisitions, and capital participations -- by Japanese firms against Japanese firms during 1980-1987. Some of the findings are as follows. First, some tendency of increasing M&A is observed, though they are still much fewer than in the US. Second, two types of M&As can be separated. One is diversifying M&As and the other is defensive M&As which are mostly horizontal and undertaken by firms in declining industries. Third, mergers are rather rare and more looser forms of combination, namely, acquisition and capital participation, are preferred. Fourth, even diversifying M&As are mostly to the fields with technological, production or marketing links. Fifth, no evidence is found that the M&As improved the profitability or growth of the acquiring firms.

These suggest that, even though M&As may increase in Japan, they will not become as popular as in the US. In particular, a conglomerate, which diversifies into various unrelated fields with little internal growth effort and with tender offers using as the main weapon, appears quite unlikely to emerge in Japan.

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1. Introduction

Mergers and acquisitions (abbreviated as M&A) in Japan are examined in this paper using the sample of 231 M&As undertaken during the past seven years.

It has been a common knowledge that, in comparison to the American management, the Japanese management tends to prefer internal growth (including the creation of subsidiaries) over external growth. A finding by Odagiri and Yamawaki (forthcoming) clearly illustrates this difference: among the 899 manufacturing firms listed at the Tokyo Stock Exchange in 1964, only 67, namely 7.5 percent, has been acquired by 1984, whereas in the US, the percentage is five times larger at 38.4 percent (384 out of the 1000 largest manufacturing firms) during 1950-72.¹

Although there may be many reasons for this difference, we would like to stress the different labor practices as most relevant. In Japan, most workers stay with same firms for most of their lifetime, and the management makes their best to retain the employees even in bad times. Lifetime employment is thus considered to be a norm. This is true despite the absence of its guarantee in any labor contract and despite dismissals actually taking place in quite a few firms during depression. Employer-employee attachment that results has several important consequences on the growth strategy of the firm. First, this causes the workers to identify their interests with those of the firm. The firm thus becomes a sort of community and any offer to acquire the firm tends to be taken as an intrusion. The management in this situation is less eager to accept a tender offer and a hostile takeover offer is bound to meet a furious resistance.

Second, growth is important to Japanese firms primarily for the purpose of utilizing and enriching the human resources and of creating promotion opportunities. For instance, firms in stagnating industries desperately seek the opportunities to diversify so as to let the now redundant workers support themselves in the new fields. Needless to say, only internal growth contributes to this purpose.

Third, because labor practices are in many ways firm specific, unifying two different practices of merging firms tend to create uneasiness and conflict of interests. The examples are the wage system, nonwage fringe benefits, the criteria for promotion and rotation, and even the quality of lunch the company provides.

Fourth, the executives of Japanese firms are typically internally promoted and are usually less constrained by the stock market evaluation. As a consequence, they are not as much worried about the short-run performance as the American executives and can stand the initial loss internal growth tends to create during the gestation period.

Notwithstanding these factors that favor internal growth, Japanese firms are now said to be undertaking more and more M&As. In particular, M&As for two purposes are recently popular. One is the acquisition of foreign firms (or plants) to start the overseas operation. Even Japanese firms find M&As more attractive for this purpose because they tend to lack the internal resources that are needed for efficient management and operations abroad, and because the victim firms, being non-Japanese, can be more easily persuaded. The other is the acquisition as a means of diversification. In Japan, during the past twenty years, the shift of industrial structure progressed at a hitherto unknown speed. This was partly caused by the oil shock in the early seventies and the upsurge of

yen at the pace no one had expected, and partly by the rapid
electronization. This structural change forced many firms, such as in steel
and shipbuilding industries, to contract its main operation and diversity
into unfamiliar fields. Finding that retraining their own workers is too
time-consuming, costly, or risky, many firms started to use M&As as a means
of its diversification strategy despite the difficulties as discussed above.

A natural question to ask is: Are the M&As going to be popular in Japan
as in the US or UK? Unfortunately, to answer this question is extremely
difficult partly because the alleged M&A wave is a recent phenomenon so that
we only have a few years of observation, and partly because neither
comprehensive data on M&A nor consolidated statement for every firm is
available. Nonetheless, it is hoped that our inquiry into the
characteristics and performance of recent M&As gives some hint to answer
this question and helps the readers to understand an important aspect of the
Japanese corporate behavior.

The following discussions are in three parts. In Section 2, we examine
the characteristics of M&As from diverse aspects. The M&As investigated in
this paper are those of Japanese firms against Japanese firms. M&As
conducted by Japanese firms against foreign firms are not investigated
because of the expected smaller national influence and because we are
interested in how the M&As are related with diversification strategy. In
Section 3, the performance of M&A is examined by comparing the profitability
and growth before and after the M&A. In Section 4, the pre-merger
performance of M&A-conducting firms is compared with that of non-M&A-
conducting firms to see if more profitable (or more growing) firms are using
M&As more or less often. Also, we examine if there is any difference in the

characteristic of M&As according to the pre-merger performance. Finally, Section 5 gives concluding remarks.

2. The Characteristics of M&As in Japan, 1980-1987

2.1. Sample

The Antimonopoly Law in Japan requires any company to report its merger with another company or acquisition of the whole or a substantial part of the business of another company to the Fair Trade Commission (hereafter JFTC). Thus JFTC publishes the numbers of these mergers and acquisitions in its annual report as well as the names of companies involved in large-scale mergers. According to this report, the number of mergers has been staying around one thousand since 1963 without any clear trend, whereas the number of acquisitions as defined above has been steadily increasing from around two hundred in 1963 to eight hundred in 1984.

These mergers and acquisitions are but a part of the methods the firms employ to expand externally, because they only refer to those in which two merging firms (or a firm and an acquired plant or other business unit) are unified to form a single corporation. That is, they do not include the cases in which company A acquires company B but keeps B as a subsidiary, namely, as another corporation under A's control. Neither included are the cases in which company A acquires only a partial share of company B and yet obtains the real control of B. These omissions are fatal for our purpose because it is these that Japanese companies are said to be undertaking more frequently these days.

To make the terminology clear, let us define merger as a legal amalgamation of plural companies to form a single company. Acquisition

refers to the acquisition of control of another company. It usually involves the acquisition of ownership, typically more than half of the share, but there are cases in which company A acquires the real control of company B without majority ownership of the share. These cases are also classified as acquisition. What we call capital participation refers to the cases in which company B retains its own control but falls under the influence of company A. The way A exerts influence on B may be technological (A provides technologies and knowhows to B), market-related (A utilizes B's market channels), or else. We call these cases capital participation because in nearly every case, A acquires some of the share of B. The direction of such share ownership may be bidirectional, that is, B may acquire a share of A at the same time A acquires a share of B. M&A in this paper refers to all of these three methods of external corporate expansion. The firm undertaking an M&A will be called an acquirer (or raider) regardless of its being merger, acquisition, or capital participation. Similarly, the target firm of any M&A will be called the acquired (or victim).

A problem in studying these M&As is the lack of published data. On the assumption that the economic press reports every important M&A, we collected the data from the Nihon Keizai Shimbun (Japan Economic Journal), a Japanese counterpart to the Wall Street Journal or Financial Times, during the period of January 1980 to July 1987. We are confident that this data is reasonably comprehensive because all the mergers for which the names of the companies involved were reported in the JFTC annual reports were also in our data. This data is also useful in that the declared objective of the M&A by the acquiring firm and that by the acquired firm are also reported, which will be utilized in the following analysis.

The sample thus collected consists of 231 M&As, undertaken by 174 firms.

2.2. Trend

Table 1 shows the number of mergers, acquisitions, and capital participations by year. From 1980 to 1984 the total number has been increasing but, after 1985, it has been decreasing. Hence, it is difficult to conclude that there has been any clear trend.

It also shows that the number of acquisitions appears to be increasing whereas the number of mergers is fluctuating within a narrow range without any trend. The latter finding is consistent with the lack of trend in the number of mergers reported to JFTC and strengthens our confidence to the representativeness of our sample.

It is difficult to compare the numbers internationally because of different definitions and coverages; yet, the difference from the US is striking. According to the report of W. T. Grimm, Co. (quoted in Nihon Keizai Shimbun, February 10, 1988), the number of M&As in the US was 3336 in 1986 and 2052 in 1987. These are sixty to a hundred times larger than the numbers of M&As in our sample and strongly suggest that M&As are much more popular in the US than in Japan.

2.3. Methods

Table 2 summarizes the 231 M&As in our sample. As for the methods used to attain external corporate growth, acquisitions (A) are most popular, with more than half of the cases, followed by capital participation (CP). Surprisingly, mergers (M) have been used only in less than fifth of the cases. This preference of looser form of combination, we conjecture, has

been caused by the acquiring firm's desire to minimize the labor problems discussed in Section 1 which are inevitable when the two formerly separate organizations have to be unified. Obviously, the looser combination must have the drawback of weaker control and slower or less reliable information flow. The finding suggests that the merit of lessening labor friction outweighs this demerit in most cases. It may also suggest the management's intention to maintain the organizational flexibility to deal with the unpredictable future change in the corporate environment that may force the firm to sell the business unit.

The finding also indicates the importance of inquiring into the forms of external investment other than mergers. The past literature in Japan, which exclusively studied mergers, is quite deficient in this regard. We will refer to such literature in more detail in Section 3.

2.4. Types

We classified the M&As into five categories following the FTC definitions of horizontal, vertical, product extension, market extension, and other M&As. We first need to warn the readers of the possible errors in this classification because, first, the business composition of the acquired firm could not be fully known in some cases and, second, the classification unavoidably involved subjective judgement. An example is the case of a food-manufacturing company acquiring a pharmaceutical company. Whether this should be classified as product extension or others is a delicate question that can be answered only by inquiring into the detail of the acquiring and acquired companies and inferring the closeness of the two businesses in technological as well as marketing aspects.

The results are also in Table 2. The proportion of horizontal M&As, 29.4 percent, is about equal to the proportion of horizontal mergers reported to the JFTC, which was 28.2 percent in 1985 (JFTC, 1986). This proportion is slightly higher than that in the US but decidedly smaller than in most other countries, such as Australia, Canada, F. R. Germany, Ireland, the UK, the Netherlands, and Sweden, where the proportion exceeded fifty percent (OECD, 1984). There are perhaps two reasons. The first, common to the US, is the stringency of the antitrust policy against horizontal mergers. The second is the preference of the Japanese management of internal growth when growing horizontally, because internal managerial resources, human or informational, are either available or can be created without much time or cost. Only when the firm intends to expand toward unfamiliar fields, will it seek external resources despite the costs of external growth discussed in Section 1.

The largest proportion of M&As took place for the purpose of product extension. The market-extending M&As were also many. In contrast, the M&As toward totally unrelated fields, which are in the others category, accounts for only 8.7 percent. This clearly suggests that the diversification movement in Japan is primarily directed at more or less neighboring fields and diversification to distant industries, as often made by the conglomerates in the US, is yet rare. In fact, in the US, the proportion of mergers in the others category, was 43.8 percent in 1975 (JFTC, 1981), making a good contrast with our result.² Again we take this Japan-US difference as an indication of the stronger motivation of the Japanese management to make the new acquired business complementary to its main business, thereby making it contribute to the full utilization of existing human and other resources.

2.5. The Objectives for the Acquirers

The press articles, from which we obtained the data, list the objectives of the M&As claimed by the acquiring companies and the reasons for sale announced by the acquired companies. Although, being the press announcements, the truthness of these objectives may be questioned, in nearly all the cases they appeared to fit the circumstances.

For the acquiring, we classified the objectives into eight categories, which are, in the order of frequency; (1) to increase the productive capacity, (2) to diversify, (3) to strengthen the marketing capacity, (4) to acquire technology, (5) to restructure the market, (6) to deal with government regulation, (7) to save the acquired from bankruptcy, and (8) to invest into a venture business. (1) to (4) must be self-evident. The business community in Japan often talks about the need for 'market restructuring' when the production capacity of an industry is considered excessive and the number of producers, the businesses believe, should be reduced. Such a view is usually expressed in (or for) stagnating or declining industries; hence, the M&As to attain market restructuring are mostly horizontal mergers (or acquisitions) in these industries.

The sixth objective is to circumvent regulatory constraints. An example is the case of a trucking company in one geographical area acquiring a trucking company in another area, for the purpose of obtaining a licence needed to operate in the latter area. The seventh, to save a failing company, is misleading in that it may conceal the true motive, since such an M&A will not be made unless the acquirer anticipates to gain; for instance, the acquisition cost may be lower than the asset resale price, or the bank(s) with outstanding loans to the failing company may have persuaded the

acquirer into the M&A in return for low-interest loans. The last objective, investing in a venture business, may well be related to the second motive of diversification or fourth motive of technology acquisition.

Table 2 shows that the first objective of expanding the productive capacity was raised by the acquiring firms in almost a quarter of the cases. However, if we combine the three objectives immediately behind, they totally occupy the majority of the cases. These diversifying, marketing-oriented, and technology-oriented objectives are all intended to expand the managerial resources into the unfamiliar areas. We can therefore conjecture that M&As are used as an important means of diversification strategy even in Japan. In contrast, the M&As of defensive nature, as shown in objectives (5) and (7), appear less important.

2.6. The Reasons for the Acquired

The reasons for the M&As raised by the acquired firms are less complete; in 62, or 26.8 percent, of the 231 cases the reasons were not known. In the remaining cases, we found basically three types of reasons. The first, raised in 112 cases, is the difficulty of continuing independent operation, for instance, due to suboptimal scale or bad management. The second, raised in 42 cases, is the own growth, which means that the firm was doing well but lacked the managerial resources needed to grow further, thereby having opted to sell itself. And the third, raised in mere 15 cases, is the former parent company's restructuring policy. Due to space limitation Table 2 only shows the number of acquired firms that raised the first reason, a defensive one. In all, this was 112 or 48.5 percent of the total 231 M&As. Since, however, the reasons were known only with 169 M&As, the percentage is understated; in fact, of these 169, they constitute 66.3

percent or approximately two thirds. This seems to suggest that few Japanese firms are willing to sell themselves were it not for a difficulty in survival, consistently with the discussion in Section 1.

2.7. Inter-Industry Merger Matrix

Table 3 shows the number of M&As according to the two-digit SIC to which the acquirer (raider) belongs and the SIC to which the acquired (victim) belongs. At the bottom is the total number of M&As conducted by the acquirers in each industry, and at the far right is the total number of victims from each industry. The classification was made by the principal business of each firm.

An apparent concentration is found along the diagonal, suggesting that intra-industry M&As are more popular than inter-industry M&As. In fact, 142 M&As, or 61.5 percent, were intra-industrial and 89, or 38.5 percent, were inter-industrial. Interestingly, this latter percentage is very close to what Goudie and Meeks (1982) found for the mergers in the UK during 1949-1973, which was 38.9 percent. In the UK, however, they found an increasing trend of inter-industry mergers (or diversifying mergers, as Goudie and Meeks called them) with the percentage being 46.6 percent in the most recent 1969-1973. Therefore, we estimate that, in recent years, preference for diversifying M&As is higher among British firms than among Japanese firms.³

Table 3 reveals that retail firms are most active in both acquiring and being acquired. Most of them were intra-industrial. This makes a contrast to the firms in the electrical equipment industry: this industry was second in both acquiring and being acquired, and yet 43 percent of them acquired firms in other industries and 56 percent were acquired by firms in other industries. In particular, M&As among four machinery-related industries --

general machinery, electrical equipment, transportation equipment, and precision instrument -- are prominent, suggesting technological proximity across these industries. The other active industry in making diversifying M&As is food manufacturing. There are four M&As against chemical firms and four M&As against firms in distribution, trade and service. The former are all acquisitions or capital participations to pharmaceutical firms and suggest that a technological link exists between food processing (for instance, fermentation) and pharmacy. The latter are all related to the marketing strategies.

These tendencies are also found in Goudie and Meeks (1982, Table 1) for the UK. Though it appears that the industrial distribution of raider or victim firms is somewhat more widespread in the UK, a strict comparison cannot be made due to the different sample size (1,481 in Goudie and Meeks as opposed to 231 in ours).

Table 3 may be also compared with Table 4, reproduced from Niida, et al. (1987), which shows the the extent of internal diversification efforts in manufacturing industries. In the upper row is the percentage of sales revenue from each product field made by the ten largest firms in the relevant industry⁴. In the lower row is the percentage of R&D expenditures made to each field conducted by the firms in the relevant industry.⁵ In either row, the percentages add up to one hundred horizontally. The figures are for the year 1979 while our M&A data are for the years 1980-1987. Thus, the industrial distribution of sales or R&D in Table 4 is for at least one year prior to the M&As examined in this paper.

Not surprisingly, the largest portions of both sales and R&D are directed to own industries, agreeing with the dominance of intra-industry M&As found in Table 3. Another finding from the two tables is that M&A is

seldom undertaken against an industry to which no previous R&D effort has been made. This very much suggests that the direction to which a firm expands internally and the direction to which a firm undertakes M&A are basically the same. Put differently, the firm seems to be making a choice of where to grow independently of the means to attain the growth. An interesting question here is whether R&D and M&A are complementary (e.g., assimilating the acquired firm requires own R&D) or substitutable (e.g., two firms in the same industry are diversifying into the same fields, one by internal R&D and another by M&A). One may also wonder if there is any order between R&D and M&A, that is, whether the firm, after M&A, makes R&D efforts to fully utilize the technological resources of the acquired business, or the firm first attempts to grow internally and then, facing the resource constraints, seeks to acquire external resources. Although the lag between the R&D data in Table 4 and our M&A data appears favorable to the latter hypothesis, the evidence is far too weak to make any conclusion.

3. The Performance

3.1. Past Studies

The effects of mergers on the performance of acquiring firms have been studied by many, particularly for the American firms. Basically these studies used either of two measures, stock market evaluation or accounting data. The first methodology calculates the CAR (cumulative abnormal returns, or cumulative average residuals) the stockholders of the bidding firm or the stockholders of the target firm gain from the tender offer. Most of these studies suggest that the stockholders of target firms tend to

gain from the bid but those of bidding firms may or may not: see Mandelker (1974) and Dodd and Ruback (1977).⁶

The second methodology compares the post-merger performance of the acquiring firm with its pre-merger performance to examine if the merger improved the performance. The most oft-used measures of the performance are profit rates and growth rates. To eliminate the effects of general business conditions and industrial differences, the changes in performance of acquiring firms are compared with those of matched non-acquiring firms. Some studies used this methodology to infer corporate objectives. For instance, if the merger is found to have increased the size or growth rate of the acquiring firm relatively to that of the non-acquiring firm, but decreased the profit rate or the stock return, it is inferred that the merger was undertaken not to maximize the stockholder wealth but to maximize the size or growth rate which are presumed to be the managers' objectives: see Mueller (1980) for an international comparison in this spirit.

A few studies have been made in Japan on the effects of mergers, all using the second methodology. Hoshino (1981) found a significantly lower profit rate for acquiring firms in comparison to non-acquiring firms and an insignificant difference in the rate of sales growth. Ikeda and Doi (1983) found that just a half of the acquiring firms in their sample improved either the profit rate or the growth rate after three years of the merger relatively to the matched non-acquiring firms. This proportion of improving acquirers, they also found, tended to increase when they took a longer period, namely, five years after the merger. Taketoshi (1984) found that the mergers improved the growth rate of the acquiring firms relatively to the non-acquiring firms, deteriorated the stock returns, and did not affect the profitability. Muramatsu (1986), again comparing the acquiring firms

with the matched non-acquiring firms, found that the mergers relatively decreased the profit rate without affecting the growth rate.

These results therefore suggest that the mergers hardly improved the performance of acquiring companies in Japan. An exception is the result by Ikeda and Doi which weakly suggest that mergers may contribute positively in the long run; however, using the same five year period, neither Taketoshi nor Muramatsu found positive effects (except to the growth rate in Taketoshi's study). Between the stockholder interests and managerial interests, these studies appear to suggest that the mergers have been more favorable (or, to be more precise, less unfavorable) to managerial interests such as growth.

All these studies, however, only dealt with mergers as defined in Subsection 2.1; none studied acquisitions or capital participations. Given the weight of these forms of external corporate growth as exhibited in the previous section, this is obviously flawed and misleading. Our study, on the contrary, examines the performance of the firms that undertook M&As be they mergers, acquisitions, or capital participations.

3.2. Data and Variables

Let $x_M(t)$ be a performance measure in year t of an M&A-conducting firm and $x_N(t)$, that of a matched non-M&A-conducting firm. The matching was made so as to equalize the sizes and sales compositions of the paired firms as much as possible. Denote the ratio, $x_M(t)/x_N(t)$, by $X(t)$. Let $t=T$ indicate the year of M&A. If $X(T+a)$ is greater than $X(T-a)$, then we may infer that the M&A has been contributing.

There is a tradeoff in the choice of a . On the one hand, in view of the length of time required to realize the gains from M&A, we wish to take a

larger a . On the other hand, the larger a the fewer the observations we can obtain of $x_i(T+a)$, because T is quite recent, 1980-1987. We decided to use $a=2$ and $a=3$ alternatively.

Many of the M&A-conducting firms, being unlisted in stock exchanges, did not publish the financial statements. Consequently, of the original 231 M&As, we could obtain the data on performance only for 46 pairs of M and N for $a=2$, and 33 pairs for $a=3$.⁷

Although these pairs differ from one another in the year of M&A and in the industrial classification, we can aggregate them to analyze $X(T+a)$ because the effects of different years and different industries, we expect, have been eliminated by taking the ratio of the values of paired firms to calculate $X(T+a)$.

Two major variables we want to examine are the profit rate on assets and the rate of sales growth. The profit rate is defined as the ratio of profits gross of interest payments and gross of corporate income tax to the book value of total assets. The growth rate is defined as the ratio of sales revenue of the year to that of the previous year.⁸ Although a few other variables have been also examined in our preliminary analyses, none of them appeared more suitable or yielded more interesting results. For instance, the profit-sales ratio must be less useful because it need not equalize across industries with different capital intensities so that its post-M&A level cannot be compared with the pre-M&A level in a diversifying merger. A similar argument can be made with the labor productivity. We thus confine the following analysis on the two variables as defined above.

We finally note that all the financial data were obtained from non-consolidated statements due to the lack of consolidated statements in many firms. Thus, the contribution of a non-merger M&A is only captured through

received dividends except for less direct contributions, for instance, a reduction in material costs associated with an acquisition or capital participation of vertical nature. We have no way of knowing the extent of consequent bias than to conjecture, obviously, that it is usually downward.

3.3. The Results

Table 5 shows the results. We examine the consequences of M&A in two ways. First, we test if $X(T+a)$, on average, is greater or less than $X(T-a)$, for $a=2$ or 3 . Second, we inquire if more firms found their performance improved than deteriorated. In calculating $X(t)$, we found some abnormal values, which were mostly caused by negative or near-zero profit rates. Since such values cause an undesirable bias to the mean, we eliminated them. Table 5 contains two sets of results. In part A, we eliminated such abnormal values only from calculating the mean of the relevant variable in the relevant time point, whereas in part B, we eliminated all the firms with one or more abnormal value(s) from calculating the mean of every variable in every time period to compare the means calculated from a common sample.

The results indicate a lack of any significant change caused by M&A. The profit rate decreased after the M&A for either $a=3$ or 2 (except the near zero value of $X(T+2)-X(T-2)$ in the common sample) but not significantly. The growth rate is also found to have insignificantly decreased when a longer period is taken.

A comparison in numbers of improving and deteriorating cases does not yield a clear tendency either. At two years after the M&A more firms found their relative profit rate to have increased from two years before the M&A but the relative growth rate to have decreased. At three years following the M&A, in contrast, more firms found their relative profit rate as well as

the growth rate to have decreased from three years before the M&A. This reversal of the result owes to the relatively good performance at three years before the M&A; see the means of $X(T-3)$.

We can also compare $X(T+3)$ to $X(T+2)$ to inquire if the performance of M&A-conducting firms improves when a longer period is taken from the time of M&A. Such an improvement is found only for the profit rate using the separate samples; otherwise we rather find deterioration.

These results do not indicate a presence of gains from M&A, more or less similarly to the previous findings in Japan discussed in Subsection 3.1. Only Ikeda and Doi found some positive results, particularly when the five-year period after mergers was taken. Because of the recent occurrence of M&As in our sample, we cannot test if their hypothesis of the long-run or lagged effects of mergers holds in our sample. Nevertheless, the result of our comparing $X(T+3)$ to $X(T+2)$ appears rather in conflict with the hypothesis.

3.4. Characteristics of Successful M&As

To examine what types of M&As are relatively doing better than the others, we regressed the change in profit rate or growth rate to a number of variables. The dependent variable is $[X(T+2)-X(T-2)]/X(T-2)$ where X is either the profit rate or the growth rate. The analysis was not made for $a=3$ because the sample is not large enough. Because we again eliminated the firms with abnormal values, the sample size differs across regression equations.

For the explanatory variables we tried several combinations of dummy variables in addition to the change in sales volume. This last variable, denoted GSIZE, was included to capture the size effect. Since the dependent

variable is the rate of change, GSIZE is the rate of change as well, namely, the rate of change in sales from T-2 to T+2.

One dummy variable we always used is MANUF which takes the value of one if and only if the M&A-conducting firm belongs to one of the manufacturing industries. Additionally, we tried several dummies concerning the method, the type, and the acquirer's stated objective. None of the dummy variables for the method -- merger, acquisition, or capital participation -- produced a significant result.⁹ Consequently, we settled with the equations shown in Table 6. The variables, besides GSIZE and MANUF, are defined as follows:

PROEXT = 1 if and only if the M&A is classified as product extensional

HORIZ = 1 if and only if the M&A is classified as horizontal

MARKET = 1 if and only if the announced objective of the acquirer is to strengthen the marketing capacity

An interesting contrast is observed from Table 6 on the effects to two performance variables. M&As into different but related markets and M&As with the purpose of strengthening the marketing capacity tend to be performing better than other M&As in terms of both profitability and growth; yet, the former (PROEXT) is significantly increasing only profitability while the latter (MARKET) is significantly increasing only growth. This seems to suggest that a lack of marketing resources tends to be the most serious impediment to growth and the acquisition of such resources through M&A is effective to overcome this impediment. On the other hand, if the firm wants to improve profitability, it should diversify into a field with a close production or marketing link with its current operation.

Horizontal M&As, on the contrary, are doing poorly, particularly in terms of profitability. This partly owes to the characteristics of industries conducting horizontal M&As, as we will discuss in detail in the next section.

The M&As conducted by manufacturing firms are resulting in poorer profitability change than those by non-manufacturing firms. The effect of size on the level of profit rate or growth rate is negative but insignificant.

4. The Characteristics of M&A-Conducting Firms

4.1. The Performance of M&A-Conducting Firms

In this section, the characteristics of M&A-conducting firms are briefly examined. First, let us return to Table 5 in the previous section. It shows that at both three and two years before the M&A their mean relative profit rates were significantly greater than one, that is, the M&A-conducting firms were on average more profitable at the time compared to the matched non-M&A-conducting firms. We also found that, in 24 of the 45 pairs, the M&A-conducting firms were enjoying higher profit rates than the matched firms at two years before the M&As. By contrast, there was no indication that the two groups of firms differed in growth rates.

Insofar as the average figure tells us, therefore, it is not a poorly-performing firm desperately seeking to get out of the crisis by M&A but rather a profitable firm seeking to obtain external resources and grow further. The story, however, does not turn out to be so simple when we look at the industrial differences as in the following subsection.

4.2. M&As in Growing versus Declining Industries

For each four-digit manufacturing industry, the rate of growth of shipment was calculated for the period of 1981-1985. This rate was compared to the rate for the entire manufacturing industries to determine if the industry is relatively growing or declining. We then assigned each of 63 M&A-conducting firms (listed firms only) into a four-digit industry by its major product. Eliminating the three firms belonging to those industries growing neither more rapidly nor more slowly than the average, we summarize the result as in Table 7.

27 firms that undertook 43 M&As were in growing industries and 33 firms that undertook 47 M&As were in declining industries. There are a few interesting differences between the two groups. First, acquisitions are the most popular method in either group of firms with the proportion of mergers slightly higher in declining industries. Second, horizontal M&As account for less than ten percent in growing industries but more than forty percent in declining industries. Third, firms in declining industries raised more often as the objectives of the M&As market restructuring and prevention of the acquired from bankruptcy than in growing industries. Fourth, difficulty in survival was the reason for being acquired more often when the acquirer was in a declining industry. Finally, more than sixty percent of the M&As by declining industries were intra-industrial whereas about the same proportion of M&As by growing industries were inter-industrial.

Roughly speaking, these seem to imply that many M&As by the firms in declining industries were of, say, defensive nature; that is, they are intra-industrial and horizontal, and made to reduce the excess production capacity under declining demand or to save the acquired firm from getting bankrupt. By contrast, many of the M&As by the firms in growing industries

appear more positive and strategic, aiming to diversify into the fields that are different from their current main operation but related in terms of production, technology, or market. With some exaggeration, let us say that M&As by firms in growing industries have resulted in entry efforts into other (mostly related) markets while those in declining industries were made to foster exits from the markets. Since this move in declining industries seems to have been affected by the adjustment policy of the Japanese government, a detailed account of the relation of M&As to the policy needs to be made.

4.3. The Adjustment Policy and M&A

To foster the elimination of excessive production capacity and to foster 'market restructuring' in 'structurally depressed industries', the Japanese government started Tokutei Fukyo Sangyo Antei Rinji Sochi Ho (Law of Temporary Measures for Stabilization of Specific Depressed Industries; abbreviated as Tokuanho) in 1978 and, as its replacement, Tokutei Sangyo Kozo Kaizen Rinji Sochi Ho (Law of Temporary Measures of Stabilization of Specific Depressed Industries; abbreviated as Sankoho) in 1983. These laws designated several industries (14 by Tokuanho and 22 by Sankoho) as structurally depressed, and required each industry to come up with an industry-wide concensus on a capacity reduction goal and a schedule for its attainment with an advice and consent of the Ministry of International Trade and Industry (MITI). The concensus is then formalized as the Basic Stabilization Plan (in Tokuanho) or the Basic Plan for Structural Adjustment (in Sankoho). Except for formally approving the firms to coordinate in capacity adjustment with MITI's cooperation and providing, if desired, loan guarantees, the laws provide no financial incentives, such as subsidies,

to these industries. It turned out, in fact, that even these loan guarantees have been applied by less than half of the industries: see Peck, et al. (1987) for a superb account of these laws and their consequences.

What is important for the discussion in this paper is a possibility that these laws may have worked in favor of M&As. For one, increased opportunities for the firms to communicate and coordinate with each other are expected to have helped creating cooperative atmosphere, possibly leading into some forms of M&A. This may have been reinforced by the 'indicative cartels' (i.e., indicated by MITI) adopted by some of the industries, which are exempt from the Antimonopoly Law if approved by JFTC. For the other, Sankoho suggested the optional use of some form of 'business tie-ups' to rationalize the production capacity and methods. These tie-ups are contractual arrangements among firms in the same industry and include mergers. These two factors, we suspect, have promoted the horizontal M&As in designated industries.

Among the M&As in our sample, 17 appeared to be related to Tokuanho or Sankoho. Each of them involved a firm in an industry designated by either of the two laws. All of them are horizontal except two, of which one, classified as vertical, is partly horizontal because the acquirer had been vertically integrated with the field of the acquired firm as one, albeit a lesser one, of its production stages. In the other case, also classified as vertical, the upward-stream firm sold the plant, probably at a discount price, to a downward-stream firm in order to exit from the stagnating industry.

By industry, these 17 M&As are as follows: paper, linerboard, and corrugated paper, 8; electric furnace, 6; compound fertilizer, 1; aluminum

smelting, 1; and shipbuilding, 1. In terms of the method, 4 were mergers and 13, acquisitions.

12 firms undertook these 17 M&As. Of these, seven belonged to declining industries as defined in the previous section. One belonged to a growing industry, which is the above-mentioned case of a downward-stream firm purchasing a plant from the exiting upward-stream firm, because the downward-stream industry was growing despite the declining (and import-dominating) upward-stream industry. One acquirer, a diversified paper and pulp manufacturer, was classified into an industry neither growing nor declining because of its main four-digit product even though its another product was in a designated depressed industry. The remaining three firms were not listed.

Thus, among the twenty-one horizontal or vertical M&As by firms in declining industries (see Table 7), seven were related to the two laws. That is, just one third of the firms in declining industries undertaking horizontal or vertical M&As may have done so under the influence of Tokuanho or Sankoho. However, the extent of this influence is hard to estimate. In some cases market restructuring is claimed to be the objective and we are rather confident that they are inspired by the laws. In some of the other cases, we are not so confident; for instance, the M&A may have been made with the aim of raising production or management efficiency and might have been undertaken even without the two laws.

Nevertheless, it appears reasonable to conclude that the adjustment policy in Japan has created a favorable environment for the firms in declining industries to undertake M&As of essentially horizontal nature. Normative evaluation of this consequence is not easy. On the one hand, such an M&A may have contributed to attaining a scale economy and internal

efficiency as MITI has envisioned. On the other, it may have resulted in a less competitive market structure with some kind of resource misallocation. Though evaluating these opposite hypotheses is certainly beyond our present capacity, the negative coefficient of HORIZ, a dummy variable for horizontal M&As, to the profitability change after the M&A (see Table 6) casts a doubt on the efficiency-raising hypothesis, since many of the horizontal M&As are related to the policy. To that extent, our result seems unfavorable to the advocates of M&As as a mean of market restructuring.

5. Conclusion

Let us first briefly summarize the results. 231 cases of M&A -- merger, acquisition, or capital participation -- were investigated that were made between Japanese firms during 1980 to July, 1987. We found some tendency of increasing M&A though the time period is too short to make any confident prediction. More than half of the M&As were classified as product or market extension type, and in more than half of the cases the acquiring firm raised as the objective diversification, strengthening of marketing capacity, or technology acquisition. These suggest that M&As are used as a means of diversification in majority of the cases. By contrast, some M&As were undertaken for defensive purposes. These were basically horizontal, made by the firms in declining industries, and aimed at restructuring markets and/or saving the victim from management difficulty. Some of these seemed to have been encouraged by the adjustment policy of the MITI.

However, our inquiry into the consequence of M&A on the profitability or growth of the M&A-conducting firm suggested a lack of positive effect. In particular, horizontal M&As, many of which are probably of the defensive

nature, were doing poorly than other M&As. The regression results implied that, to improve profitability, product extension M&As are relatively contributing whereas, to foster growth, market-oriented M&As are relatively contributing.

These results provide little clue on the corporate objective behind the M&As. There is no evidence suggesting that the management has undertaken them to increase stockholder wealth or to maximize its own utility. In some cases, particularly in declining industries, M&As have been undertaken to save the acquired from bankruptcy and thereby saving the employees from dismissal. In view of the labor practices in Japanese corporations, such consideration of employee welfare may have been playing an important role in some M&As.

Two of the questions we sought to answer throughout this study are: Are there any peculiarities in the M&As in Japan in comparison to those in other countries, say, the US or the UK, and are the M&As going to be popularly used by Japanese companies as a means of corporate growth as in the US or the UK? Although the severe data constraint we had to face, such as the lack of consolidated statements and the inability to inquire into the long-run consequences of M&As because of their occurring only recently, does not permit us to answer these questions fully, some hints seem to have been gained from our analysis.

First, the majority of the cases are acquisitions and capital participation. Though comparable data are not available for other countries, this appears to suggest the preference of Japanese management toward looser forms of combination. In other words, it suggests a difficulty in integrating two previously separate corporate organizations after a merger. This, we believe, very much owes to the weight given in

Japanese firms to the human aspects of organization as we discussed in Section 1.

Second, two thirds of the target firms raised difficulty in survival as the reason for being acquired. In other words, only one third would have accepted the M&A were it not for the management crisis. This very much suggests the existence of a strong feeling against being acquired among the management and employees. Again, we believe this to be the consequence of the Japanese management that is deeply concerned with the human aspects of corporations.

Third, even though more and more Japanese firms are now using M&As as a means of diversification, most of the diversifying M&As are directed to the fields with close production, technological, or marketing link. In addition, they are directed basically to the same fields to which they are also making internal efforts, for example, research and development. This fact seems to suggest that M&As are complementarily used with internal growth efforts or that M&As are made when internal growth efforts are hampered by the constraints in internal resources. It seems unlikely, therefore, to witness in the near future an emergence of a Japanese firm acting like an American conglomerate, diversifying into diverse and unrelated fields with little internal growth effort and with tender offers using as the main strategic weapons.

There seems no doubt that more and more Japanese firms will use M&As as a part of their growth strategy, particularly, in view of the tremendous speed with which the Japanese industries are changing. Yet, distinctive differences will remain quantitatively and qualitatively between the M&A strategy taken by Japanese firms and that by American firms. The

consequences of these differences on resource allocation and macro performance are very much needed to be investigated.

FOOTNOTES

1. The US figures are originally from Mueller (1986).
2. The percentage of "others" in the JFTC data of mergers was 27.4 percent in 1985 (JFTC, 1986), which is higher than ours but still much lower than in the US. This gives a suspicion that our criteria for product extension and market extension may be wider than the criteria adopted by JFTC. Yet, in terms of the Japan-US ranking, the conclusion is not affected.
3. OECD (1984) reports that the proportion of inter-industrial mergers was 31.7 percent in Canada in 1976-1977 and 58.2 percent in F. R. Germany in 1980. Thus the percentage is much higher in Germany than in Japan, the UK, or Canada. We note, however, that the industrial classification is finer in the German study than in other countries; therefore, the percentage for Germany is overstated.
4. In four industries (SIC codes 16, 19, 23, and 25) the numbers of firms are less than ten.
5. The firms in the sample are not restricted to the ten firms used to calculate the sales composition. The original source for the R&D data is Report on the Survey of Research and Development (Statistics Bureau, Management and Coordination Agency, Japan).
6. Also see the criticism by Mueller (1984).
7. For the firms undertaking two or more M&As during the sample period, we set T to be the year of first M&A, mainly because the data for $T+3$ become less likely available for a later M&A. The same methodology was also used in the regression analysis to be discussed in the next subsection.
8. Hence, more accurately, it is a growth factor. We used this definition to minimize the occasions of negative values since with negative $x_M(t)$ and $x_N(t)$, $X(t)$ gives an awkward interpretation.
9. This may suggest that the understatement of the contribution of acquisitions and capital participations due to the use of non-consolidated statements (see Subsection 3.2) is not seriously.

REFERENCES

- Dodd, Peter and Ruback, Richard (1977) "Tender Offers and Stockholder Returns," Journal of Financial Economics, 5, 351-373.
- Fair Trade Commission (1981) Ryutsu Mondai to Dokkinho [Distribution Issues and the Antimonopoly Law]. Tokyo: Printing Bureau of the Ministry of Finance.
- Fair Trade Commission (1986) Kosei Torihiki Iinkai Nenji Hokoku [Annual Report of the Fair Trade Commission]. Tokyo: Printing Bureau of the Ministry of Finance.
- Goudie, A. W. and Meeks, G. (1982) "Diversification by Merger," Economica, 49, 447-459.
- Hoshino, Yasuo (1981) Kigyo Gappei no Keiryō Bunseki [Econometric Analyses of Corporate Mergers]. Tokyo: Hakuto Shobo.
- Ikeda, Katsuhiko and Doi, Noriyuki (1983) "The Performances of Merging Firms in Japanese Manufacturing Industry: 1964-75," Journal of Industrial Economics, 31, 257-266.
- Mandelker, Gershon (1974) "Risk and Return: The Case of Merging Firms," Journal of Financial Economics, 1, 303-336.
- Mueller, Dennis C. [ed.] (1980) The Determinants and Effects of Mergers: An International Comparison. Cambridge, Massachusetts: Oelgeschlager, Gunn & Hain.
- Mueller, Dennis C. (1984) "Further Reflections on the Invisible-Hand Theorem," in Peter Wiles and Guy Routh [eds.] Economics in Disarray. Oxford: Basil Blackwell, 159-183.
- Mueller, Dennis C. (1986) Profits in the Long Run. Cambridge: Cambridge University Press.
- Muramatsu, T. (1986) "Zaimu Deta ni Yoru Gappei Koka no Bunseki" [Analyses of the Effects of Mergers with Financial Data], Kigyo Kaikei, 38, 668-677.
- Niida, Hiroshi; Goto, Akira; and Tsuruhiko Nambu [eds.] Nihon Keizai no Kozo Henka to Sangyo Soshiki [Structural Change and Industrial Organization in the Japanese Economy]. Tokyo: Toyo Keizai Shinposha.
- Odagiri, Hiroyuki and Yamawaki, Hideki (forthcoming) "The Persistence of Profits: International Comparison," in Dennis C. Mueller [ed.] The

Dynamics of Corporate Profits: An International Comparison. Cambridge:
Cambridge University Press.

Organisation for Economic Co-operation and Development (1984) Merger
Policies and Recent Trends in Mergers. Paris: Organisation for
Economic Co-operation and Development

Peck, Merton J.; Levin, Richard C.; and Goto, Akira (1987) "Picking Losers:
Public Policy toward Declining Industries in Japan," Journal of
Japanese Studies, 13, 79-123.

Taketoshi, Ryuichi (1984) Waga Kuni Seizogyo no Gappei ni Kansuru Kenkyu
[A Study on the Mergers in Japanese Manufacturing Industries].
Unpublished master's thesis, University of Tsukuba.

Table 1. Mergers and Acquisitions in Japan: 1980-1987

Year	Mergers	Acquisitions	Capital Participation	Total
1980	2	8	5	15
1981	11	10	8	29
1982	3	14	6	23
1983	7	14	2	23
1984	3	31	10	44
1985	6	25	13	44
1986	8	18	8	34
1987 (Jan.-July)	3	11	5	19
Total	43 (18.6%)	131 (56.7%)	57 (24.7%)	231 (100%)

Table 2. Classification by Type, Method, and Objective

Type	Method	Acquirer's Objective							Subtotal	Total
		<1>	<2>	<3>	<4>	<5>	<6>	<7>		
Horizontal										
M	10 (1)		2 (1)	3 (2)	15 (10)				30 (14)	
A	19 (16)		1 (1)	2 (2)	3 (2)		5 (5)		30 (26)	68 (42)
CP	1 (0)		5 (0)				2 (2)		8 (2)	
Vertical										
M		1 (0)							1 (0)	
A	7 (4)			2 (0)			1 (1)	1 (0)	11 (5)	17 (6)
CP	2 (1)	1 (0)	1 (0)	1 (0)					5 (1)	
Product Extension										
M		7 (1)							7 (1)	
A	5 (5)	20 (11)	8 (2)	11 (5)	1 (1)			2 (0)	47 (24)	85 (38)
CP	2 (1)	2 (1)	11 (6)	11 (4)				5 (1)	31 (13)	
Market Extension										
M	2 (1)		2 (0)				1 (1)		5 (2)	
A	6 (2)	1 (1)	8 (4)			11 (6)	1 (1)		27 (14)	41 (21)
CP	1 (0)		2 (1)			6 (4)			9 (5)	
Others										
M									0 (0)	
A		11 (3)	3 (1)	1 (0)				1 (1)	16 (5)	20 (5)
CP		2 (0)	1 (0)	1 (0)					4 (0)	
Subtotal										
M	12 (2)	8 (1)	4 (1)	3 (2)	15 (10)	0 (0)	1 (1)	0 (0)	43 (17)	
A	37 (27)	32 (15)	20 (8)	16 (7)	4 (3)	11 (6)	7 (7)	4 (1)	131 (74)	
CP	6 (2)	5 (1)	20 (7)	13 (4)	0 (0)	6 (4)	2 (2)	5 (1)	57 (21)	
Total	55 (31)	45 (17)	44 (16)	32 (13)	19 (13)	17 (10)	10 (10)	9 (2)		231 (112)

Notes: M = Merger, A = Acquisition, CP = Capital Participation.
 For the numbering in the acquirer's objective, see the text.
 Shown in parentheses are the number of cases in which the acquired raised management difficulty as the reason.

Table 3. Inter-Industry M&A Matrix

Victim	Raider																					Total							
	06	09	12	14	16	18	19	20	21	23	25	26	27	28	29	30	31	32	34	40	43		44	45	49	53	61	69	72
06																													0
09		5												1												1			7
12			8																					2					10
14				1															1								1		3
16																			1										1
18						8		1																					9
19															1														3
20		1	4					10			2													1					18
21									2		1																		3
23		1								1																			2
25		1						2																					3
26												9																	9
27														1															1
28														4	1														5
29		2				1					4			4	4	2							1	1					19
30								2			5	1			4	12											1		27
31															1		2												3
32																4	1	4											9
34														2															3
40																			1										11
43																							1						1
44																							2						2
45																								1					4
49	1													1	1									8					12
53																										27	1		31
61																										12		1	13
69																													0
72			1				1								1	1										2	4	9	22
Total	1	10	17	1	0	9	1	15	2	1	8	14	0	9	14	21	5	4	7	14	1	2	1	12	30	15	5	12	231

Notes: The industry classification is as follows:

06, mining; 09, construction; 12, food; 14, textile; 16, lumber; 18, paper and pulp; 19, publishing and printing; 20, chemicals; 21, petroleum; 23, rubber products; 25, glass, cement and ceramics; 26, iron and steel; 27, non-ferrous metals; 28, metal products; 29, machinery; 30, electrical equipments; 31, transportation equipments; 32, precision instruments; 34, other manufacturing; 40, ground transportation; 43, water transportation; 44, flight transportation; 45, warehouse; 49, wholesale; 53, retail; 61, finance; 69, real estate; 72, miscellaneous services.

Table 4. The Proportion of Sales and R&D Expenditures by Field, 1979

Industry	Fields																Total		
	12	14	16	18	19	20	21	23	25	26	27	28	29	30	31	32		34	
12	96.2					2.2												1.6	100
14	67.3			0.2		29.1		0.2					0.8					2.3	100
16	0.1	66.3	0.9	0.4		26.9		1.9					3.4	2.5	2.3			3.8	100
18		45.2	86.1			40.4												13.9	100
19			10.8	86.1		2.4							0.3					0.7	100
20		0.1		81.5	1.4	14.9												1.8	100
21					100													0.04	100
23		0.7		0.8	74.0	4.5		0.4	0.7			0.8	6.9	2.2	1.5			5.1	100
25	2.5	3.7				84.0		5.4					4.3			0.9		1.8	100
26	1.3	0.4		0.1	0.1	92.7		0.5			0.2		0.2	0.9	0.2			2.1	100
27							0.2	0.4										0.8	100
28						25.2	99.2											0.9	100
29						8.9	54.3				11.0	0.1						5.9	100
30						4.1												0.9	100
31						10.2	4.7					0.2	0.3					5.9	100
32						24.5						0.2	0.3					0.9	100
33						0.6						0.2	0.3					0.5	100
34						1.7						0.4	0.7					9.2	100
Total	5.1	3.1	1.1	2.6	1.5	6.6	14.9	1.5	2.1	12.4	4.3	2.0	8.0	13.8	16.1	1.0	4.1	72.3	100
	2.1	0.5		0.6	0.2	22.0	0.7	1.8	1.9	4.4	1.3	1.4	10.3	28.5	18.8	2.8	2.8	53.4	100

Notes: Upper rows: composition of sales by field, Lower rows: composition of R&D expenditures by field.
 See Table 3 for the industrial classification code.
 No R&D expenditure was reported in the lumber industry (SIC code 16).

Table 5. Relative Performance of M&A-Conducting Firms
before and after the M&As

	Profit Rate	N	Growth Rate	N
<u>A: By Separate Sample</u>				
(1) Mean of X(T-3)	1.145 (2.33)**	31	1.035 (1.59)	33
(2) Mean of X(T-2)	1.144 (2.71)***	43	1.003 (0.18)	46
(3) Mean of X(T+2)	1.067 (1.38)	41	1.005 (0.46)	46
(4) Mean of X(T+3)	1,102 (1.62)	29	0.998(-0.23)	33
(3) - (2)	-0.076(-1.06)		0.002 (0.11)	
(4) - (1)	-0.043(-0.49)		-0.037(-1.53)	
No. of cases: (3) > (2)	24 (53.3%)		21 (45.7%)	
(3) < (2)	21 (45.7%)		25 (54.3%)	
No. of cases: (4) > (1)	13 (40.6%)		12 (36.4%)	
(4) < (1)	19 (59.4%)		21 (63.6%)	
<u>B: By Common Sample</u>				
(1) Mean of X(T-3)	1.151 (2.44)**	26	1.019 (1.17)	26
(2) Mean of X(T-2)	1.128 (1.83)*	26	0.986(-0.63)	26
(3) Mean of X(T+2)	1.135 (2.01)*	26	1.006 (0.48)	26
(4) Mean of X(T+3)	1.110 (1.70)	26	1.001 (0.09)	26
(3) - (2)	0.007 (0.07)		0.020 (0.79)	
(4) - (1)	-0.041(-0.46)		-0.018(-0.88)	
No. of cases: (3) > (2)	16 (61.5%)		12 (46.2%)	
(3) < (2)	10 (38.5%)		14 (53.8%)	
No. of cases: (4) > (1)	10 (38.5%)		10 (38.5%)	
(4) < (1)	16 (61.5%)		16 (61.5%)	

Notes: In parentheses are the following:

For (1), (2), (3), or (4); t-values to the hypothesis that the mean equals one.

For (3)-(2) or (4)-(1); t-values to the hypothesis that the difference equals zero.

For the number of cases; percentages to the whole sample. (for part A, profit rate, one case was dropped due to negative profits.)

***, **, and *, respectively, indicate significance at 1. 5. and 10 percent level two-tailed.

Table 7. M&A-Conducting Firms Classified
by Growing versus Declining Industry

	Growing Industry	Declining Industry
Total Number of Acquiring Firms	27	33
Total Cases of M&A	43 (100%)	47 (100%)
<u>Method</u>		
Mergers	5 (11.6%)	7 (14.9%)
Acquisitions	27 (62.8%)	31 (66.0%)
Capital Participation	11 (25.6%)	9 (19.1%)
<u>Type</u>		
Horizontal	4 (9.3%)	19 (40.4%)
Vertical	5 (11.6%)	2 (4.3%)
Product Extension	28 (65.1%)	19 (40.4%)
Market Extension	0 (0%)	4 (8.5%)
Others	6 (14.0%)	3 (6.4%)
<u>Acquirer's Objective</u>		
Increasing Productive Capacity	11 (25.6%)	12 (25.5%)
Diversification	16 (37.2%)	5 (10.6%)
Strengthening Marketing Capacity	5 (11.6%)	6 (12.8%)
Technology Acquisition	7 (16.3%)	10 (21.3%)
Market Restructuring	0 (0%)	5 (10.6%)
Dealing with Regulation	0 (0%)	0 (0%)
Preventing Victim's Bankruptcy	1 (2.3%)	5 (10.6%)
Investing in Venture Business	3 (7.0%)	4 (8.5%)
<u>Reasons for the Acquired</u>		
Difficulty in Survival	21 (48.8%)	27 (57.4%)
Others	22 (51.2%)	20 (42.6%)
<u>Two-Digit SIC of the Acquirer and the Acquired</u>		
Same	16 (37.2%)	29 (61.7%)
Different	27 (62.8%)	18 (38.3%)

Table 6. Determinants of M&A Performance

Independent Variables	Dependent Variables			
	Profit Rate Change (1)	Profit Rate Change (2)	Growth Rate Change (3)	Growth Rate Change (4)
Constant	0.06 (0.39)	0.18 (1.06)	-0.03 (-0.33)	-0.00 (-0.02)
GSIZE	-0.13 (-1.22)	-0.09 (-0.75)	-0.06 (-1.02)	-0.05 (-0.88)
MANUF	-0.30* (-1.99)	-0.18 (-1.01)	0.02 (0.26)	0.04 (0.51)
PROEXT	0.32*** (3.27)		0.07 (1.33)	
HORIZ		-0.27* (-1.76)		-0.03 (-0.34)
MARKET	0.10 (0.77)	0.04 (0.24)	0.15** (2.16)	0.15* (1.93)
\bar{R}^2	0.332	0.102	0.128	0.053
N	44	44	46	46

Notes: t-values in parentheses.
 ***, **, and *, respectively, indicate significance
 at 1, 5, and 10 percent levels.
 N denotes the sample size.