JAPANESE MULTINATIONALS IN ASIA:

Drivers and Attractors

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December 23, 1998

For *Oxford Development Studies*

This paper is based on a survey conducted through the Japanese Ministry of International Trade and Industry in March 1993. We are grateful to Osamu Kawaguchi for his help in designing and implementing the survey and to Vinod Thomas and Ramagopal Agarwala for suggesting that we undertake this endevour. Suggestions from the editors are gratefully acknowledged. The views expressed here are those of the authors and do not necessarily represent the those of the World Bank or its member governments.

ABSTRACT

This paper studies the choice by Japanese multinationals of Asia and of specific Asian countries as investment destinations. High costs in Japan exert a general push towards investing in Asia. Unlike investment in the U.S. and Europe, trade barriers do not drive Asian investment. While domestic markets of host countries are important, conditions for efficient production in the host country also determine its attractiveness. In Asia, firms have looked for industrially literate workers, though the new Japanese investment *is* being guided more by low wages. Japanese investors also stake out early positions in growing markets. The inability to repatriate earnings is the strongest disincentive to Japanese investment. A favorable FDI policy is desirable but its importance declines as a firm gains experience in a country.

1. Introduction

Using a specially designed survey, this paper identifies: (a) the characteristics of Japanese firms likely to undertake foreign investments in Asia; and (b) the country characteristics associated with Japanese investments in Asia. The firm-level analysis here contrasts with the macro approach that correlates country characteristics with *aggregate* flows into that country (see Wheeler and Mody 1992). It contrasts also with the industry-level analysis where industry characteristics such as the degree of competition, the level of entry barriers, and the degree of technological sophistication are examined as determinants of foreign investment (e.g., Kogut and Chang 1991). The firm-level perspective is important because much of the theorizing on decision to invest abroad derive from the interplay of firm capacity and motives to invest abroad (see Caves 1982 for a literature review). This paper confirms certain findings obtained from the more aggregative studies, but highlights the significant importance of firm characteristics (or capabilities) in the decision to undertake foreign investment.

The data permits us to distinguish between the *drivers* of foreign investment and country characteristics that *attract* the investment. Investment is driven by operating cost conditions in Japan (due for example to increasing wage costs as well as high capital costs) and by firm characteristics such as size, export propensity, and research and development. Features that attract investment include a host country's domestic market, its operating conditions, and investment incentives offered.

In studying foreign investment, survey-based analyses are typically limited to determining the subjective preferences of investors ("do you value low wages? or "does country X have a favorable foreign investment policy?"). Such analyses are intended to elicit the priority accorded by investors to the cost and policy characteristics of alternative investment locations. While subjective perceptions are

valuable, it is also necessary to determine if firms in fact act according to the priorities they state in such surveys, i.e., do they put their money where they say they would?

In this project, we did ask firms to rank the factors they considered important in their decisions to invest. However, we also asked them: (1) if they had invested in Asia; (2) the share of foreign investment undertaken in Asia; and (3) their likelihood of investing in specific Asian countries in the following three years. The information available allows us both to rank their stated preferences and to conduct an econometric analysis that identifies partial correlations between investments undertaken and firm and (perceived) country characteristics.

We begin in the next section by reviewing the literature and highlighting the major theoretical constructs and hypotheses. The surveyed firms are then described. The analysis of past investment decisions in Asia is conducted in a two-step process; we model both the choice to invest in Asia and the share of investment in Asia, conditional on investment in that region. Finally, we analyze the expected flow of Japanese investment and its distribution within Asia, where we focus on China, Malaysia, Thailand, Indonesia, the Philippines, India, and Vietnam.

2. The Literature and the Theoretical Background

This review deals with two topics: (1) the analysis of Asia as an investment location by Japanese firms; and (2) the use of firm-level data, as distinct from industry-level or aggregate Japanese foreign investment, for such an analysis.

2.1 The locational choice of Japanese firms

What forces internal to Japan are driving Japanese firms to Asia? And, why do firms invest in specific Asian locations? The framework of analysis is based on three considerations. First, rising cost conditions in Japan are driving firms to seek alternate locations. Second, globalization of the economy is creating the pressures to seek production locations that minimize cost while effectively serving customer needs. Third, and in the context of the first two factors, a variety of country characteristics (attractiveness of the domestic market, production conditions, and incentives for foreign investment) and rivalry between firms lead to locational choices.

The location choice of Japanese firms has been studied only to a limited extent. Much of the literature is on Japanese investment in the United States—which is not surprising, in view of the huge Japanese investment into the U.S. in the early 1990s. The focus is not on locational choice but rather on the capabilities of Japanese firms investing in the U.S. (e.g., Kimura 1989, Kogut and Chang 1991, Caves 1993) or the choice of the mode of investment (Hennart 1991). Head, Ries, and Swenson (1995) study the locational choice of Japanese firms within the U.S. and find that agglomeration effects are strong in determining this choice. Studies examining why Japanese firms undertake investment in the United States, rather than exporting products from Japan or locating elsewhere, suggest that prospective trade barriers were important in motivating these investments (e.g., Kimura 1989). Studies on Japanese investment in Europe are fewer but once again trade barriers are highlighted as an investment driver (Dunning 1991 and Encarnation and Mason 1994).

Surprisingly, there has been little attention to Asia as a destination for Japanese investment. While the U.S. does draw the bulk of Japanese investment, Japanese firms have had a long and

influential presence in Asia (Dunning 1991) and the evidence from this paper and elsewhere (e.g., the Jetro study cited by Dawkins) is that the share of Asian investment is likely to grow. Kimura (1989) deals with choice between the U.S. and Asia as investment destinations. Belderbos and Sleuwaegen (1996) study the allocation of Japanese investment across North America, Europe, and East Asia and find that the Asian investment is driven by factors quite different from the "west-bound" investment.

We identify the "push factors" inducing Japanese firms to invest abroad. Rising costs—high labour and capital costs and the yen appreciation—are often represented as the cause of the investment push abroad (Dunning 1991). Hence the concern over the "hollowing" of the Japanese corporation. To our knowledge, this push has not been subjected to systematic empirical analysis.

What factors determine the choice of specific locations? Does proximity to consumers help exploit new markets? Or is minimizing costs of production the main motivation? And, if the latter, what specific production costs are being reduced? Such analysis of country features is used, in part, to inform policy towards foreign investors (e.g., Brewer 1993 and Rolfe, Ricks, Pointer, and McCarthy 1993). For the purpose of this paper, Dunning's (1995) analysis of foreign investment in a "globalizing" economy provides a useful framework. Dunning notes that producers are under pressure to respond quickly to consumers' demands for new and high quality ("fault-free") products. At the same time, governments worldwide have adopted more market-oriented policies, allowing firms greater opportunities to locate their production processes in the most cost-efficient manner. Governments have also been active in reducing barriers to foreign investors and providing incentives to attract them. While investors search for cheaper production sites, these same forces imply that a "cheap" location is not necessarily one with low wage costs. The increasing use of advanced technologies and the importance

of continuing innovations in organizational processes require a labour force of high quality, or at least an industrially literate labour force capable of learning.

Besides the specific characteristics of host countries (e.g., market size, labour costs, labour quality), firms are motivated—or spurred—by the actions of other firms. Knickerbocker (1973) examined the influence of rivalry in driving foreign investment in a pioneering study. He showed that the more oligopolistic an industry, the greater was the likelihood that foreign investments would be concentrated into a short period of time. Li and Guisinger (1992) survey an extensive literature confirming this force and provide further empirical evidence in support, as does Vernon (1993). Our data permits us also to test the hypothesis that competitors' behavior influences investment decisions.

2.2 The value of firm-level studies

In the past, foreign investment studies have principally been at a country or industry level. The cross-industry studies have sought to infer the capabilities of firms from the average characteristics of the industries studied. A recent example is Kogut and Chang (1991) where the R&D characteristics of the different industries are key variables in describing investment flows. As Hennart (1991) notes, industry proxies have also been used to assess the form of foreign investment, e.g., full ownership versus participation in a joint venture. Where firms in an industry are relatively homogenous, the use of industry characteristics would be appropriate. However, where differences between firms within an industry are the source of competitive advantage, industry proxies could be misleading.

Firm-level studies of foreign investment are becoming more common (e.g., Kimura 1989, Hennart 1991, Li and Guisinger 1992, Woodcock, Beamish, and Makino 1994, Head, Ries, and

Swenson 1995, and Kogut and Chang 1996). However, there is an inherent trade-off between a full analysis of firm heterogeneity and the ability to generalize across sectors and countries. Firm-level studies are typically restricted in industry and host country coverage. Kimura (1989) studies Japanese semiconductor firms, Li and Guisinger (1992) focus on service firms, and Kogut and Chang (1996) study investment by Japanese electronics firms in the United States. Only Head, Ries, and Swenson (1995) access a significant-sized database that allows analysis of investment in several industrial sectors; but they are also restricted to Japanese investment in the United States. Our study of Japanese investment in several Asian countries is based on firms in several industries, including food products, chemicals and chemical products, building materials, electrical goods and machinery, electronics products, non-electrical machinery, and automobile and aircraft products and parts.

A related limitation of firm-level studies is that they typically study only a binary decision: whether to invest or not, or whether to invest independently or with a joint-venture partner. Thus the focus is on whether certain decisions were taken and not on the extent of investment. An exception in this regard is Kimura (1989); Woodcock, Beamish and Makino (1994) are also able to study some performance measures. Our study is, in this regard, most similar to Kimura (1989) since we do have measures of investments undertaken.

3. The Investors: Some Descriptive Statistics

The survey questionnaire, designed by the authors, was mailed by the Japanese Ministry of Trade and Industry (MITI) to about 600 Japanese firms of which 173 (approximately 30 percent) returned usable responses in March 1993. The sample thus obtained cannot be treated as

representative of all Japanese firms—we do not know the characteristics of firms who did not respond. There is, however, sufficient heterogeneity amongst the respondents to permit a statistical analysis of their foreign investment behavior.

The firms in our sample are relatively large (table 1). The average annual sales are 330 billion yen (over $3 billion). The smallest fifth of the firms in our sample has average annual sales of around $40 million—the smallest firm has sales of about $2 million. This is also a set of firms that is prone to making significant foreign investments. In the three years prior to the survey, over a fifth of their investment was undertaken outside Japan. The Japan External Trade Organization (Jetro) has found that one-fifth of production by Japanese firms is located overseas and this share is expected to grow to a third; U.S. firms produce 25 percent of their output abroad while German firms are the least international with less than 20 percent of their output produced at foreign locations (Dawkins 1996).

Asia's share of foreign investment by the sample firms is 35 percent. There is an apparent inverse relationship between the size of a firm and its share of investment in Asia: the smallest firms, on average, undertake 60 percent of their foreign investment in Asia; the share falls to about 20 percent for the largest firms. To examine this relationship more closely, we regress the share of investment in Asia against firm characteristics and the strength of various preferences stated by firms.

4. Investment in Asia

Before launching into a regression analysis of a firm's Asian share in its foreign investment portfolio, an important econometric issue has to be considered. Not all firms invest in Asia. It is possible that certain firm characteristics not observed by the econometrician influence both the decision to invest in Asia and the share of Asian investment in the firm's total foreign investment. Failure to

include these unobserved characteristics in the regression equation biases the coefficients of the variables that are included in the analysis. This problem is known as the selectivity bias. To account for selectivity bias, a two-step estimation procedure is used (Heckman 1979). First, a probit estimation helps distinguish firms that do invest in Asia from those that do not. Heckman (1979) shows that a variable, generally referred to as the inverse-Mills ratio, can be constructed from the probit, which proxies for the omitted variables. In the second step, the share of investment in Asia is explained as a function of firm characteristics, their perceptions of cost conditions in Japan, the country characteristics they seek when they invest abroad, and also the inverse-Mills ratio, leading to consistent estimation of the investment equation.

4.1 Probit results

Small firms have a greater tendency to undertake investment in Asia (table 2). Also, firms that perceive Japanese capital costs to be high are more likely to invest in Asia. While small firms are particularly prone to perceive high capital costs in Japan (and so the two variables are correlated), clearly they also exercise an independent effect. It is interesting that the surveyed investors, on average, do not consider the capital cost disadvantage in Japan to be high (see table 1). However, the variations in perceptions are reflected in the decision to invest. Thus, in survey data when firms report a highly favorable or unfavorable view on a particular issue, the average view can be misleading; it is important to corroborate how firms act on the view stated. We find further that perceptions of high capital costs in Japan are positively and significantly (at the 5 percent level) correlated with the goal to raise capital from the country in which the investment is being made. The question asked was: how important (on a

scale of 1 to 7) is availability of local financing in your decision to invest in Asia. The correlation between this variable and the severity of perceived capital costs in Japan (also measured on a scale of 1 to 7) was 0.29, which is significant at the 5 percent level. Thus, capital costs (and/or the easy availability of finance) appear to be an important factor determining the choice of investment location.

Finally, low labour costs do not attract Japanese to the Asian locations: in other words, those who value low labour costs are not necessarily those who are investing in Asia. We asked firms how important (on a scale from 1 to 7) were low Asian wages in their decision to invest in Asia. Firms did report that low wages were important, the average response being 5.6. However, though low Asian wages are potentially attractive to all investors, regression results presented in table 2 indicate that, if anything, firms attracted by low wages tend actually to have a lower probability of investing Asia. This could imply that low wages are associated with low productivity. Swedenborg (1979) reports that Swedish firms are found to invest in high wage locations and interprets this to indicate a preference for high skill labour required for the relatively sophisticated production operations undertaken by Swedish multinationals.

4.2 Drivers of Asian investment

The regression results show that the selectivity correction (the Inverse-Mills ratio) is important in assessing the share of foreign investment going to Asia. Without the selectivity correction, the result is that smaller firms place a larger proportion of their foreign investment in Asia (table 2). However, with the selectivity correction, the sign on the size variable turns positive and for, certain specifications, statistically significant at the 5 percent level. The interpretation is that certain unobserved factors lead to

a presence in Asia but also to a low share of overall foreign investment (the negative sign on the selectivity term implies a negative correlation between the error terms of the two equations). This would be true, for example, where the firm's interest in an Asian location is exploratory; and the data suggests that larger firms are more likely to undertake such exploratory investment.

Note that the Inverse-Mills ratio is correlated with the size variable and with perceptions of capital cost in Japan. When all three are introduced into the regression, the coefficients are not statistically significant. However, when either the size variable or the capital cost variable are dropped, statistical significance is more evident. Our interpretation is as follows. The Inverse-Mills ratio can be thought of a variable that reflects for the individual firm the ease of doing business in Japan (and, strictly, also locations other than developing Asia). Not surprisingly, this variable is correlated with size: smaller firms are likely to higher costs of doing business or may face greater competitive challenges than larger firms. Similarly, cost of doing business is likely to be correlated with capital costs.

Thus, the general thrust of these findings is that Japanese firms are driven to invest in developing Asia when they perceive high costs of doing business in Japan. These costs are likely to be especially important for smaller firms. But they also influence larger firms where capital costs are of importance and where competitive conditions and regulatory policies are onerous.

If costs of doing business are important, what role do labour costs play? Japanese firms demand high quality—and not merely cheap—labour. Our results show that it is the variations in the demand for high quality labour that influence the investment decision. Firms that think highly of the labour quality in the Asian region are the ones that undertake substantial investment in that region—greater the perception of labour quality in Asia, greater is the share of investment in Asia. The

important message from these findings is that while low wages may be desirable, perceptions of labour quality are key to attracting foreign investment.

These results support the hypothesis proposed by Lucas (1990) that the lack of complementary human capital inputs lowers the productivity of physical capital in developing countries and hence limits the flow of foreign investment to these countries. However, the measure of human capital is not necessarily the levels of educational attainment in that country. For example, our respondents find Thai labour quality to be higher than in the Philippines although the secondary enrollment rates in the Philippines are much higher. Thus the labour quality of interest to foreign investors is related more to industrial experience rather than to formal educational achievements. This does create the possibility of a self-reinforcing condition where an industrially literate labour force attracts foreign investment and such investment further enhances the quality of the labour force. Those not in this loop are in danger of being excluded from the benefits of international capital flows.

Another important driver of foreign investment could be trade flows. Specifically, does greater involvement in international trade coincide with or substitute for foreign investment? A feature of some interest (and robustness) is the negative relationship between the export propensity of the investing firm and the share of its foreign investment in Asia. Investments in Europe and the United States during the second half of the 1980s and the early 1990s to produce locally under the threat that their exports would be restricted; highly export-oriented firms were induced to increase their production facilities in western industrialized nations. In contrast, firms investing in Asia are not under threat of barriers to exports to that region. Rather in seeking to participate in the rapid growth elsewhere in Asia, they are

also choosing production locations that offer the possibility of efficient production and low costs of inputs, provided no sacrifice is entailed in production quality.

4.3 Policies to attract investment

Finally, we consider country policy characteristics. In choosing their production locations, what country policies do Japanese investors look for? Limitations on repatriation of earnings is considered a serious disincentive by Japanese investors planning investments in Asia (on a scale of 1 to 7, with 7 being the most severe disincentive ranking, limits on repatriation rank 5.62). Moreover, this perception of disincentive is strongly correlated with a low share of foreign investment going to Asia.

Note, however, the absence of any other country policy measure as correlate of the share of Asian investment in aggregate foreign investment. Of particular interest is the absence of ownership restrictions and export requirements as influencing Asian investments. We do find that government restrictions on foreign ownership are strongly resented by Japanese investors: on a scale of 1 (low disincentive) to 7 (high disincentive), restriction of ownership to less than 50 percent of firm equity is rated at 5.7. Requirements to export are similarly considered a major disincentive: the requirement to export more than 50 percent of output is rated at 4.9. Thus, once again, though raw perceptions suggest that these policies would have a significant influence on investment flows, regression results tell a different story.

The difference in the two perspectives is reconciled by observing that foreign investors face few restrictions in the countries favored by the Japanese. This results in foreign investors owning a large share of the equity of their venture abroad. For example, investors responding to our survey note that,

on average, they owned about 45 percent of the venture in the Philippines and 60 percent of the venture in China. For Thailand, Indonesia, and Malaysia, the average share of equity lay in between 50 and 60 percent. Only in Vietnam and India was the share of equity owned on the low side—below 25 percent. Thus, it appears that Japanese firms screen out those countries with the most onerous restrictions and obligations. In countries where they do invest, they do view ownership restrictions (and local content requirements) as a disincentive if those restrictions are in place; however, for the most part, these are countries with low restrictions or countries in the process of dismantling restrictions. The results also point to a warning. If, for some reason, the restrictions were reintroduced, then firms with the greatest investment in the country would be the most seriously affected, creating the possibility of large investment outflows.

The implication also is that concerns about repatriation of earnings are both strong and current—unlike ownership restrictions which are in practice being phased out, repatriation of earnings is not thought to be a concern that can be dismissed as practically unimportant. Thus, firms that view repatriation of earnings as a serious problem in Asia do, in fact, lower their Asian investments.

5. Future Plans of Japanese Investors in Asia

Aggregate investment flows in the first half of the 1990s suggested that Asia and Latin America were increasingly favored locations for Japanese firms while investments in Europe and the U.S. have grown at a slower pace (Dawkins 1996). To determine trends within Asia, our survey asked firms how likely they were to invest in each of the seven Asian countries in the three years following the survey. For each country, the firm was asked to rank the likelihood of investment from 1 (very unlikely) to 7

(very likely). From an already strong position, China emerged as a strikingly popular destination (table 3). Japanese investors expected to maintain their strong interest in Thailand and Malaysia. From a low base, firms showed increasing interest in Indonesia and Vietnam. There were no indications that India and the Philippines would gain significant Japanese investment in the immediate future.

The contrast between China and India is strong. Rows two through five of table 3 summarize the country ratings on different dimensions. Ratings were sought on a scale of 1 (poor) to 10 (excellent). China does better on all counts. Note especially the low rating India receives for labour quality relative to the other six countries: clearly the elite education of a few has little influence on industrial literacy of the manufacturing workforce. Malaysia and Thailand, with the strongest Japanese presence, do especially well on the availability of equipment and parts, which could also proxy for logistics infrastructure. They also score highly on FDI policy. Not surprisingly, infrastructure, FDI policy, and past presence tend to be correlated. In other words, where significant foreign investor presence exists, infrastructure and policies are likely to be viewed favorably.

The regression analysis (table 4) seeks to explain a firm's likelihood of investing in a specific country in the next three years. This set of investigations permits us to examine the effect of country specific attributes on the plans of investors. The regression presented in the first column of table 4 assumes that planned investment bears the same relationship to investor characteristics and country features for all host countries. Since this is unlikely to be the case, we also repeat the regression for three country groups: (1) China, Vietnam, and Indonesia; (2) India and the Philippines; and (3) Malaysia and Thailand. Any grouping runs the risk of being arbitrary. Our reason for this particular division was that the first group is experiencing the most growth in investors; the second group has had low

investment and is not attracting much investor attention either; the third group, Malaysia and Thailand, has had significant investment in the past and is continuing to retain strong investor interest.

We do not require the "selectivity correction," as in section 4, because virtually all firms report their investment intentions. The likelihood of investment in the countries under consideration increases as the size of the firm increases, this being true for all countries and for each of the three groups. Results in section 4 showed that, in the past, small firms were more likely to invest in developing Asia; however, once "costs of doing business" were taken into account, large firms had a greater share of investment in Asia. Also, as in section 4, the export ratio of the firm is negatively correlated with its planned investment in the Asian countries under consideration. This implies a continuation of the past investment pattern: those serving the Japanese market are more actively seeking Asian investment locations than those who have a significant export presence. Finally, once size is controlled for, firm R&D has a negative influence on planned investment.

A most interesting finding is that foreign investment decisions are very closely related to those that competitors are expected to take.[1/] We asked our respondents how likely it was that their competitors would invest in each of the seven countries. The regression results show a strong partial correlation between the firm's plans and its expectations regarding the behavior of its competitors: if a firm expects that its competitors are very likely to invest in China, the firm itself considers it very likely that it would invest in China.

1/ We have explored this connection in more detail in Kinoshita and Mody (1997).

Of interest here is the difference between the three country groups. The influence of competitors is powerful for the China/Indonesia/Vietnam group. The coefficient of 0.27 could crudely be interpreted as indicating that a ten percent increase in the likelihood of competitors investing in these countries will have the effect of raising the respondent firm's likelihood of investing in those countries by 27 percent. (This elasticity interpretation assumes that the scales represent logarithmic preferences.) At the other extreme, the coefficient for India and the Philippines has a value of 0.13, suggesting that while investors are influenced by the behavior of other investors in these countries, the rush to India and the Philippines is much less. Finally, the coefficient for Malaysia and Thailand is 0.27, which is a strong indication that these countries are not close to saturation in terms of the flow of new investment, as some observers are inclined to believe.

Respondents to our survey reported that their most important market was the domestic market of the country they were investing in, with importance measured on a scale from 1 (not important) to 7 (very important). Here both the stated perceptions and the regression results point in the same direction. The raw score for importance of the domestic market was 5.5 (for all other markets, the score was less than 5.0). Moreover, the pooled regression results, as well as the results for different groups, show that perception of the size of the host country's domestic market exerts a positive influence on planned investment in that country. Thus, although jumping of trade barriers is apparently not a consideration, the size of the domestic market is nevertheless important.

Low labour cost and high labour quality are also important factors. Notice that while labour quality continues to be important for the pooled set of countries, and thus in differentiating between the different group of countries. Low wages now emerge as a strong factor, in contrast to the results in

section 4 which sought to explain the share of Asian investment in all foreign investment. The finding could reflect a change from the past when Japanese investment was only in its early stages; with major new investment planned, wages may play a more key role in determining investment locations. However, one difference between the results here and in the previous section is that here we are considering investments in specific countries whereas earlier we were investigating determinants of investments in all these countries. The implication could be that when taken as a group, low wages in these countries are not the main feature attracting Japanese investment, but perceived wage levels influence choice within the group of countries.

Finally, we consider a group of variables that are highly correlated to each other: availability of parts and equipment, FDI policy, and past presence in the country (see the correlation matrix in table 5). Past presence dominates the regression results; in other words, when the past presence variable is included, the other two enter with weaker effects. Availability of parts and equipment does enter with positive signs when the other two variables are dropped, but the coefficients are rarely significant. Favorable FDI policy is a desirable country characteristic and again the effect is stronger when the past presence variable is not included. We also interacted the country perception of FDI policy with the presence or absence of the firm in that country. The result shows that policy has less influence on likelihood of investment if the firm is already present in the country under consideration. The implication is that perception of FDI policy is more relevant as a potential barrier to entry rather than as an impediment to expansion of existing firms that, presumably, have learnt to work within the system.

6. Conclusions and discussion of findings

Investment in developing Asia is undertaken by those Japanese firms that perceive a high cost of doing business in Japan. High costs of business reflect, in part, high capital costs. Also, small firms, at a competitive disadvantage in Japan or under greater regulatory constraints, have had a greater propensity to invest in Asia. While operating costs are relatively high for small firms, and some large firms appear to have undertaken only exploratory investment in Asia, others have made quite substantial investment even in the past. Looking ahead, larger firms have stronger expectations about future investments in Asia. These results lead to a mixed prognosis for further Japanese investments in Asia. On the one hand, the large currency depreciations in developing Asia have further lowered the costs of doing business in those countries. On the other hand, Japan is itself in the midst of increased deregulation, which should lower costs of doing business especially for small firms.

The share of investment in Asia has been inversely related to export propensity, suggesting that investments undertaken by Japanese firms in Asia are being driven principally by perceptions of market growth in that region rather than by an imperative to substitute for exports. The race with competitors is indicative of the pressure to establish early presence in the markets to be served. However, the recent Asian crisis may dampen this motivation for Japanese investment since domestic market growth is likely to much more modest in the coming years than in the past "miracle" years.

The results highlight the strong Japanese investor preference for operating in conditions where the human capital is well developed. Supporting this result, we find also that the size of operation of the subsidiary (measured by the number of employees) is correlated with the perceived labour quality in that country and the share of exports in sales is related to easy availability of technicians and supervisors.

This is strong confirmation of the Lucas (1990) hypothesis on the need for complementary human assets for the flow of financial capital.

We find it is useful to distinguish between a country's general "policy stance" and specific elements of FDI policy. Perception of favorable FDI policy does lead to greater investment in the country. However, the evidence also is that those that invest a lot in a particular country are likely to be more familiar with the workings of policy and could view it as less intimidating than firms that have no (or limited presence) and hence limited experience in the country. Thus FDI policy would have more of an influence on entry than on continued expansion in the country. This suggests that efforts to attract key investors could pay-off both because their initial entry will increase the probability of their future investment and also by providing a signal to others. But the results also show that such a policy, which relies on early entry leading to a cascade, requires complementary investment in improving availability of parts and equipment (and in logistics infrastructure, more generally) to be sustainable.

When we consider the elements of FDI policy, we find that repatriation of earnings is a very serious concern to investors. What is a surprise, however, is that other dimensions of FDI policy—ownership restrictions and export requirements, for example—although perceived by investors as important, seemed to have less influence on actual investment decisions. Thus, they were perceived as serious disincentives but had no clear effect on investments undertaken, indicating that in practice these policies were relatively liberal in the countries considered. The results, thus caution policymakers that attempts to impose (or reimpose) ownership restrictions or export commitments could backfire.

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SURVEY OF JAPANESE FOREIGN INVESTMENT IN ASIA

Introduction

This questionnaire deals with your decisions to invest in Asia. We are especially interested in your decisions to invest in seven Asian countries: China, India, Indonesia, Malaysia, Philippines, Thailand, and Vietnam. By foreign investment, we mean investment in joint-ventures, subsidiaries, or acquisitions.

Background of Japanese firm being interviewed

1.Since what year has your firm been in operation in Japan _____?

2.For the year 1992, or the closest year available, please give the following information:

a) Japanese Sales _____ billion yen
b) Worldwide Sales _____ billion yen
c) Exports from Japan _____ billion yen

3.Approximately, what is the ratio of your R&D expenditure to sales. Please check the relevant box below:

R&D expenditure/Sales Ratio is:	Please place a ✓ in the relevant box
Zero	/__/
More than Zero but less than 1%	/__/
More than 1% but less than 3%	/__/
More than 3% but less than 5%	/__/
Greater than 5%	/__/

Reasons for investing outside Japan

4. How important have the factors listed below been in influencing your decision to invest in Asian countries outside Japan?

(In answering this question, please place a check mark (✓) in any one of the boxes on the scale, as described above.)

	Not Important						Very Important
High capital costs in Japan	:	:	:	:	:	:	:

5. In choosing the location for your foreign investment, what country characteristics of the business environment do you seek?

Country Characteristics:	Not Important						Very Important
Size of domestic market	:	:	:	:	:	:	:
Low Labour Cost	:	:	:	:	:	:	:
Good Labour Quality	:	:	:	:	:	:	:
Good Infrastructure	:	:	:	:	:	:	:
Local Financing	:	:	:	:	:	:	:
Easy Availability of Equipment and Parts	:	:	:	:	:	:	:

6. In general, which of the following investment policies of host governments do you consider a serious disincentive when making an investment decision?

FDI Policies	Not a Serious Disincentive						Serious Disincentive
Requirement to export:							
more than 50% of output	:	:	:	:	:	:	:
less than 50% of output	:	:	:	:	:	:	:
Requirement on local ownership:							
more than 50% local ownership	:	:	:	:	:	:	:
less than 50% local ownership	:	:	:	:	:	:	:
Restrictions on repatriation of earnings	:	:	:	:	:	:	:

7. In each of the following countries, how likely are you to invest in the next three years?

	Possibility of investing in the next three years	
	Very Unlikely	Very Likely
China	:___:___:___:___:___:___:___:	
India	:___:___:___:___:___:___:___:	
Indonesia	:___:___:___:___:___:___:___:	
Malaysia	:___:___:___:___:___:___:___:	
Philippines	:___:___:___:___:___:___:___:	
Thailand	:___:___:___:___:___:___:___:	
Vietnam	:___:___:___:___:___:___:___:	

8. Are your competitors making investments in the following Asian countries?

	Very Little	Very Substantial
China	:___:___:___:___:___:___:___:	
India	:___:___:___:___:___:___:___:	
Indonesia	:___:___:___:___:___:___:___:	
Malaysia	:___:___:___:___:___:___:___:	
Philippines	:___:___:___:___:___:___:___:	
Thailand	:___:___:___:___:___:___:___:	
Vietnam	:___:___:___:___:___:___:___:	

Country Characteristics

9.Please rate each country on a scale of 1 to 10 for each of the characteristics listed. A score of 10 would indicate highly favorable and a score of 1 would indicate very unfavorable.
(We would appreciate your rating of the country even if you do not actually have an investment in the country.)

	Labour		Infrastructure			Business/ Political Environment			Policy Environment		
	Cost	Quality	Transport	Telecom	Energy	Local Financing	Equipment/ Parts	Political Risk	Macro Economic	FDI Policy	Trade Policy
China	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
India	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Indonesia	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Malaysia	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Philippines	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Thailand	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Vietnam	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

THANK YOU VERY MUCH

Table 1: **Descriptive statistics: means (and standard deviations)**

Asian share of past foreign investment	35.2 percent (33.0)
Worldwide sales	330 billion yen (895.0)
Exports/worldwide sales	13 percent (15)
R&D/sales	3.65 percent (1.23)
High capital cost in Japan	3.75 on a scale of 1 to 7 (1.38)
Low labour cost in host country	3.99 on a scale of 1 to 7 (1.62)
Good labour quality in host country	4.82 on a scale of 1 to 7 (1.69)
Restrictions on repatriation of earnings	5.46 on a scale of 1 to 7 (1.45)

Table 2: **Determinants of allocation of investment to Asia**

Variable	Probit (decision to invest in Asia)	Share of investment in Asia (ordinary least squares with correction for selection bias)			
Worldwide Sales	-0.0002* (-4.64)	-0.0006 (-1.52)	0.006 (1.26)		0.007* (2.21)
Export/Sales		-67.2* (-2.32)	-78.0* (-2.45)	-68.8* (-2.19)	-77.4* (-2.48)
High Capital Cost in Japan	0.18* (3.93)	6.68* (2.47)	1.15 (0.24)	5.64** (1.77)	
Low Labour Cost in Host Country	-0.22** (-3.11)	-3.29 (-0.92)	1.71 (0.25)	-5.28 (-1.29)	-2.98 (0.69)
Good Labour Quality in Host Country		13.87* (3.25)	15.58* (2.45)	15.84* (2.47)	15.05* (2.57)
Restriction on Repatriation of Earnings		-12.01* (-3.30)	-11.41* (-2.75)	-12.94* (-3.22)	-11.32* (-2.79)
Inverse-Mills Ratio			-86.78 (-1.42)	-9.99** (-1.88)	-97.94* (-2.49)
Constant	-0.065 (-0.01)	26.59 (0.88)	109.1** (1.74)	52.1 (1.19)	121.4* (3.33)
Adjusted R-squared		0.37	0.48	0.46	0.50

* significant at 5 percent, ** significant at 10 percent, chi-square (probit) and t-values in parentheses.

Table 3: **Characteristics of Likely Future Investors by Country**

Variable	China	India	Indo-nesia	Malay-sia	Phili-ppines	Thai-land	Vietnam
Number of Firms Likely to Invest in next 3 years	162	155	155	155	155	156	158
Likelihood of Future Investment (1-7 Scale)	4.10	1.74	2.86	2.87	2.03	3.18	2.55
Labour cost	8.41 (1.48)	7.19 (2.12)	7.36 (1.72)	6.25 (1.79)	6.78 (1.85)	6.67 (1.63)	7.90 (1.78)
Labour quality	6.40 (1.86)	4.59 (1.96)	5.74 (1.78)	6.44 (1.77)	5.11 (1.96)	6.51 (1.69)	5.82 (2.07)
Equipment and parts	3.89 (1.72)	3.35 (1.62)	4.54 (1.73)	5.68 (1.95)	4.00 (1.76)	5.55 (1.86)	2.82 (1.64)
FDI policy	5.01 (1.72)	4.00 (1.45)	5.43 (1.83)	6.22 (1.75)	4.53 (1.80)	6.06 (1.65)	4.32 (1.91)
Of those likely to invest, the number who are already present	33	5	28	40	11	47	2

Figures in parentheses are standard deviations.

Table 4: **Determinants of Expected Investment in Asia**
(Dependent Variable: Likelihood of Future Investment)

	All Countries	China, Indonesia and Vietnam	India and Philippines	Malaysia and Thailand
Worldwide Sales	0.00002*	0.00003*	0.00004*	0.00001
	(3.293)	(2.396)	(3.128)	(0.695)
R&D Ratio	-0.147	-0.202	-0.153	-0.018
	(-1.565)	(-1.393)	(-0.990)	(-0.105)
Export/Sales	-2.023*	-2.070*	-0.041	-3.700*
	(-3.006)	(-1.993)	(-0.039)	(-2.830)
Investment by Competitors	0.242*	0.274*	0.132**	0.266*
	(5.798)	(4.262)	(1.707)	(3.560)
Domestic Market	0.158*	0.114*	0.114**	0.104
	(4.515)	(2.315)	(1.650)	(1.352)
Labour Cost	0.205*	0.152*	0.074	0.267*
	(5.016)	(2.191)	(1.159)	(3.040)
Labour Quality	0.079**	0.070	0.057	0.023
	(1.748)	(1.036)	(0.743)	(0.242)
Equipment and Parts	-0.023	-0.083	0.126	0.108
	(-0.449)	(-1.076)	(1.242)	(1.154)
FDI Policy	0.092**	0.259*	0.063	-0.171
	(1.661)	(3.263)	(0.577)	(-1.569)
Past Presence	0.946*	0.797*	1.032**	1.182*
	(4.562)	(2.355)	(1.901)	(3.571)
Constant	-0.329	0.186	0.096	0.366
	(-0.722)	(0.248)	(0.140)	(0.402)
Adjusted R Sq.	0.41	0.39	0.38	0.35

* significant at 5% and ** significant at 10%.

Table 5: **Correlation between parts and equipment availability, FDI policy, and past presence**

	Equipment and Parts	FDI Policy	Past Presence
Equipment and Parts	1.00		
FDI Policy	0.58	1.00	
Past Presence	0.38	0.36	1.00