

Reproducing Behaviors in International Expansion:  
Japanese Location Choices in Europe

Area VI

Sub-área 14: Economia Espaço e Urbanização

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# **Reproducing Behaviors in International Expansion: Japanese Location Choices in Europe**

## **ABSTRACT**

Firms engaged in multinational activities see international expansion as a necessary but uncertain organizational change. The location decision in a foreign market is, by all means a complex task that involves high search costs. Solutions for this search can be found in learning from past behaviors or monitoring behaviors of other related firms. Social ties established within the same industry or same area can influence organization's actions. I checked these effects by an empirical study on the entries of Japanese manufacturing affiliates in Europe from 1984-1998. Findings indicate that when facing uncertainty, organizations economize in search costs by repeating behaviors previously learned and imitating actions of other relevant organizations. (momentum, mimetic, socio-economic ties)

## **INTRODUCTION**

Expanding internally the production network of a firm is an uncertain major organizational change involving high costs and risks. Therefore, a firm will set up its own operations in a foreign market when the costs of transferring knowledge and products across firm boundaries are substantially higher than the costs of transferring those across subsidiaries. Moreover, firms concerned with keeping their advantages will favor entering a market through a subsidiary rather than licensing or selling its technology outright to a firm already operating in the host location (Martin, Swaminathan and Mitchell, 1998).

In the global business environment, firms choose to enter regions where they need to be present. Since the Single Market resolution in 1992, the European market became so large that the choice of locating there becomes critical. Entering here provided access to a market where the incumbent firm can spread products and technologies developed earlier and where it can retaliate against competitors back home (Kogut, 1988). Additionally, the new market can act as a drainage system of products allowing the firm to hedge against local fluctuations in supply and

demand.

The Japanese investment in the Europe has been oriented to the EU market as a whole (Dunning and Cantwell, 1991). However, in the quantity of establishments, Japanese firms follow a center-periphery model of industrial location (Krugman, 1992; Leonardi, 1995) where the majority of manufacturing plants is located in the core of industrial Europe.

The first entrants in the market may have followed the historical path of industrial location in core Europe: England, France, and Germany. These areas had reached industrial maturity and had developed competitive labor markets, transportation facilities and a considerable amount of technologically advanced suppliers. Choosing to locate in a more developed industrial area, firms guarantee not only access to a larger and better quality market demand, but also to a better-educated workforce. These characteristics are similar to those in the home market providing, in a way, more business culture proximity and less perceived uncertainty.

When detailed information on the host country is missing, entry by known reference group firms may indicate that the focal market is attractive. Moreover, once a firm establishes manufacturing facilities, the others follow suit in order to negate any advantage that the former might gain. If a firm follows the behavior of other organizations, we say that firms are adopting mimetic behavior (DiMaggio and Powell, 1983). Mimetic behavior is especially likely to occur among similar firms, which calls attention to the social environment and its formal and informal networks. I checked for the imitation strategy, as a way to access information and avoid uncertainty when entering in new markets, by coding for each country previous entries of firms belonging to the same industry in Japan.

Geographical proximity may facilitate formal and informal contacts between managers. Close distances favor the establishment of social ties and may be influential when making the decision. Especially in a business environment based on personal ties like in Japan. Although, I cannot measure the leakage of information or the contacts established among decision-makers, I can investigate entry location by the previous choices of firms whose headquarters have proximity in Japan and choose the same location in Europe.

Increasing knowledge of a host nation may reduce both the costs and the uncertainty of operating in that foreign market (Buckley and Casson, 1985). Firms previously engaged in production activities in a certain country have more information and establish their networks of suppliers and distributors therefore will try to maintain its connections. I investigate this

tendency of maintaining or expanding prior strategic actions in current strategic behaviors by counting the previous entries by a same parent firm (Amburgey and Miner, 1992).

The paper is organized as follows. Next section sets out the theoretical framework that leads to the hypotheses tested in this research. After, I explain the methodology used and present the empirical results. Finally last section summarizes and discusses the results and proposes some policy and future research implications.

## THEORETICAL BACKGROUND AND HYPOTHESES

Expanding internationally is a risky strategy taken by firms. A risk-averse organization will not undertake a high-risk decision unless it promises a high expected return (Singh, 1986). So, a firm will make the decision of expanding into a foreign market if the costs of exporting or licensing a product are strategically higher than internationalization (Martin et al., 1998; Dunning, 1992). A firm investing in production facilities will choose the location that minimizes total costs (Benito and Gripsrud, 1992), and at the same time will prefer a location where demand is large or supply of inputs is particularly good (Krugman, 1992).

A firm is more likely to enter a market if it knows the possible buyers and suppliers and also can expect good chances of business (Martin et al., 1998). An efficient way of collecting information about the markets and the opportunities of business in those locations helping organizations to save on search costs (Cyert and March, 1963). It seems easier for a decision-maker to observe the behavior and the consequences of the actions taken by other firms (DiMaggio and Powell, 1983).

### **Mimetic Behavior**

Physical proximity makes information on local firms more readily available: it is easier for managers to scan the activities of local firms than others located further away (Pouder and St.John, 1996). Social networks are to a large extent, are shaped by actor's spatial locations. The most likely result is that information may spread through regional elite networks, perhaps by communications among CEOs (Davis and Greve, 1997). Firms that have their centers of decision-making placed in close proximity to each other are subject to a greater flow of information, so the behaviors of other firms are easier to observe and imitate if they are located

nearby. Location decisions may be seen as a phenomenon of local diffusion of information. Taking into consideration the social structure and the importance of physical proximity in the establishment of contacts between decision-makers, I explore the idea that closer proximity makes imitation easier. The above leads to the first hypothesis of this study:

Hypothesis 1 Organizations are more likely to expand into nations where other firms located in the same area had expanded.

Firms of a same industry cluster very often in the same region to benefit from agglomeration economies. It is likely to find that firms located in the same area would belong to the same industry. This is more evident in the Japanese vertical industrial structure where suppliers would be located close to the main assembler or manufacturer. Studies showed that firms follow main customers to maintain their business or extend their business abroad and back to home country (Banerji and Sambharya, 1996; Romo and Schwartz, 1995). Direct competitors also belong to the same industry and can locate in different regions. From learning theories we know that firms save on search costs by monitoring other firms.

The easiest way of gathering relevant information about markets is from firms belonging to the reference group of a focal firm (Fiegenbaum and Thomas, 1995; Porac, Thomas and Baden-Fuller, 1989 and Reger and Huff, 1993). Firms may observe firms belonging to the same industry because similar organizations rely on similar environmental resources and are affected by similar constraints (Hannan and Freeman, 1977). Organizations monitor their environment in search of information from organizations with comparable characteristics (Strang and Soule, 1998). Imitating strategies used by other Japanese relevant firms when entering Europe may facilitate the location decision, as organizations face the same needs and same initial problems when entering in a new market. Empirically, previous entries of same industry are coded to check the reference group imitation effect in my second hypothesis:

Hypothesis 2 Organizations are more likely to expand into nations where other firms located in the same industry had expanded.

### Strategic Momentum

A firm's expansion to a new market is also determined by its own history. When an

organization takes actions over time, it develops routines and competencies, and those become independent engines for further action (Nelson and Winter, 1982; Levitt and March, 1988). Actions that led to successful experiences will be repeated and unsuccessful ones will be abandoned or transformed, thus reducing the need of continuous search for alternatives. Firms show a tendency to maintain or expand the emphasis and direction of prior strategic actions in current strategic behavior, which is called strategic momentum (Amburgey and Miner, 1992). A firm deciding a new location draws on existing competencies and experiences, increasing the chances that the same choice will be made again. So firms instead of searching for information on new markets will locate another manufacturing plant in the same country. One way to test empirically for momentum is to analyze the organization's history of entries, counting the cumulative number of each firm's entry in each market (Kelly and Amburgey, 1991). To study this effect, I focus on the previous entry choice by same parent firms. The prediction is:

Hypothesis 3 Organizations are more likely to expand into nations where they have previously entered.

Japanese location in Europe is a response to the need of maintaining the presence in a market that close itself to the Japanese imports. Most of the restrictions were directed towards imports from Japan and the newly industrializing economies of Asia, where Japanese firms had established primarily its production networks. Japanese suppliers from these countries were also among the prime targets of anti-dumping measures. However, restrictions did not apply to the few Japanese production facilities located in Europe by early eighties. As the European "fortress" imposed strict barriers on entry of manufacturing goods produced outside Europe, Japanese investment increased substantially as a way to maintain their market share. The discussion and subsequent creation of the Single Market in 1992 brought a substantial increase in the number of Japanese entries in Europe.

Regarding all the efforts in making uniform rules inside the European Market, Europe is still characterized by a very strong center-periphery pattern when one considers purchasing power and infrastructure facilities (Krugman, 1992; Leonardi, 1995). This has been determining the industrial location and the establishment of some industrial clusters within Europe (Porter, 1998). Although the Japanese firms could be located in any region in Europe, they maintain a cluster location pattern. The greatest amount of entries is still made in the industrial core of Europe:

France, Germany and England accounts for about 70 percent of the total entry-choices.

## METHODOLOGY

### **Study Population**

The sample consists of 287 Japanese manufacturing firms who expanded their operations into the fifteen countries of the European Union during the period 1984–1998. This period encompasses the whole spectrum of the recent developments in the Japanese direct investment in Europe that increased in the 1980s and it includes the benchmark of the establishment of the Single Market resolution in 1992. From this sample 83 firms are not listed in the books (part one and two) of the Tokyo Stock Exchange. The affiliates of these non-listed firms are also included in the analysis. These were all the firms that located manufacturing plants in the EU during this period, for a total of 627 affiliated manufacturing firms.

From the population of Japanese firms that entered Europe during this period, all the firms with missing data on location in Japan were excluded, as well as those which did not have manufacturing, production/processing or assembling as their main activity. The expansion of international activities is done step-by-step. A typical establishment chain could begin with occasional exports; develop into regular exports through agents, followed by setting up sales subsidiaries, and end with fully-owned production facilities abroad (Benito and Gripsrud, 1992). Therefore, I collected data on manufacturing subsidiaries, which indicates a stronger international commitment than sales offices.

### **Data Collection**

The main data sources for firm variables are the volumes of Toyo Keizai Data Bank: Kaigai Shinshutsu Kigyo Soran – Kaisha Betsuhen and Kuni Betsuhen, for the period 1984-1998. These data sources include manufacturing firms located in Europe in which a Japanese firm owns not less than 10% of the stocks. For the present research, the name of parent firm, the respective code (a four-digit number assigned by the securities identification code conference upon the first listing on stock - exchanges), and the date of establishment of operations were inputted. The non-listed firms have no defined code, so these cases were sorted by the name of the parent firm and given a code. The books had retrospective data on the year of establishment of activities of the

affiliate in Europe that counts as the first entry choice for a parent firm. I followed the Nikkei Database codes for the location in Japan (code for the 47 prefectures, ken in Japanese) and for the industry code (two digits) based on the activity of the parent firm in Japan. Several issues of the Directory of Japanese Affiliates in Europe, JETRO and of the annual Survey of European Operations of Japanese Firms in the Manufacturing Sector, JETRO, were also used to complement the information on Japanese affiliates in Europe.

Table 1 gives the definition and data sources for all variables.

Insert table 1 around here

GDP per capita for each country is adjusted by Purchasing Power Parity (PPP) prices for the purpose of comparison. It is a widely used measure of productivity of a nation and it is expected to have a positive relation to location choice. Bigger and more productive economies usually have higher expenditures in education and infrastructure, and may be more attractive to incoming firms. The inclusion of the number of engineers (or university graduates) per thousand labor force gives an indication of the availability of qualified labor force and it is expected to have a positive effect on locational choice.

With respect to factors affecting costs, labor cost is one of the most important components. Usually higher labor costs are expected to deter foreign investment. However, depending on the industry needs (more or less labor intensive) and the development of the host country they may be a sign of well-trained and motivated workers and therefore attract investment. Since labor costs are given in local currencies, I had to get a comparable measure of labor costs among the countries by multiplying the labor cost per hour by the value of GDP at constant prices in dollars divided by the GDP in local currency. Money market rate measures the price of capital available for firms. Although its effects depends on industry characteristics (lower or higher capital intensive), in general, host country lower capital is expected to favor locational choice. Unemployment rate reflects a pool of potential workers, and higher unemployment rates will likely be related positively with locational choice. However, it may also be a sign of higher benefits on unemployment subsidies and a more volatile work force that may not be to the liking of Japanese investors used to a stable labor market. To double check for working force availability, data on manufacturing employment was collected and a positive effect on locational



choices is expected.

### Model

The location choice of the Japanese manufacturing plants is a conditional logit problem where the dependent (response) variable is the country chosen by each investor. The choice is influenced by differences in country characteristics at the time of the entry, but not by firm characteristics (which are the same across alternatives). No order or sequence is imposed on the choices, since these countries all benefit from the European open market characteristics and I assume that they are not a priori ranked or clustered.

For the  $i^{\text{th}}$  affiliate faced with a choice of alternative countries, suppose that the utility of alternative  $j$  at time  $t$  is

$$U_{itj} = a_j + \beta' z_{itj} + e_{itj} \quad (3.1)$$

Where  $a_j$  is the parameter of the intercept,  $\beta$  represents the parameters of the characteristics to be chosen,  $z_{itj}$  are the characteristics considered and vary over time and choice and  $e_{itj}$  are the disturbances and vary by firm, time and country. If the  $i^{\text{th}}$  affiliate makes country choice  $j$  in particular, I assume that  $U_{itj}$  is the maximum among all the  $J$  utilities at time  $t$ . Hence the statistical model is driven by the probability that choice  $j$  is made, which is

$$\text{Prob} (U_{itj} > U_{itk}) \text{ , for all } k \neq j \quad (3.2)$$

Assuming that the organization chooses the  $j$  that maximizes the utility function and that the disturbances have a Weibull distribution (McFadden, 1973), this leads to the conditional logit model.

$$P(Y_{it} = j) = \frac{e^{\alpha_j - \alpha_1 + \beta'(z_{itj} - z_{it1})}}{\sum_{k=1}^J e^{\alpha_k - \alpha_1 + \beta'(z_{itk} - z_{it1})}} \quad (3.3)$$

This model is appropriate when the primary interest is in what features of the alternatives are important to make the choices and the dependent variable has more than two alternatives of choice. Our model has fifteen possible choices in the European Market. The equation to estimate is

$$U_{itj} = a_j + \beta_1 (\text{GDP per head}_{itj}) + \beta_2 (\text{market money rate}_{itj}) + \beta_3 (\text{unemployment rate}_{itj}) + \beta_4 (\text{labor cost}_{itj}) + \beta_5 (\text{number of engineers}_{itj}) + \beta_6 (\text{manufacturing employment}_{itj}) + \beta_7 (\text{same}$$

$$\text{prefecture in Japan}_{ij}) + \beta_8 (\text{same prefecture in Japan x entered}_{ij}) + \beta_9 (\text{same industry in Japan}_{ij}) \beta_{10} (\text{same industry in Japan x entered}_{ij}) + \beta_{11} (\text{same parent}_{ij}) + e_{ijt} \quad (3.4)$$

The variables summarized in table 1, are coded per year and refer to country j at time t. All independent variables are lagged by a year.

## Results

Table 2 shows the descriptive statistics for the data set for the period 1984 -1998, which has 593 observations, each with a choice of 15 alternative nations.

Insert table2 around here

Even after checking several data sources, the data on countries had some missing values, which decreases the number of observations from 627 to 593 observations. If there had been no missing values at country level, the sample on firms would have been totally analyzed and additional observations would have been available.

There is an expected moderate positive correlation between labor cost and number of engineers, and between labor cost and GDP per capita. There is moderate negative correlation between labor cost and money market rate. In economic terms productivity growth, measured here by GPD per head, is correlated with the growth of the standard of living of a country. However the relationship is neither automatic, nor is aggregate productivity growth necessarily benefiting all members as we can see by the negative correlation with unemployment rate. When considering new investments firms are usually interested in overall indicators and these correlations are associated to more dynamic economies.

Tables 3, 4 and 5 show the results of the analyses for the models testing the hypotheses presented earlier in the paper. The first model in all tables includes only the control variables of country location-specific advantages (Dunning, 1992). Each explanatory variable testing a hypothesis – entrants from the same location in Japan, industry in Japan and parent firm - is added in each latter model. The last model includes all the variables that are being tested in each table.

### All Affiliates Entry in Europe

The analysis in table 3 include all affiliates for the period considered.

Insert table 3 around here

Model 1 includes only control variables for country characteristics. These are variables widely used in the literature on location choice. All variables are significant and they have the expected signs. Although these results do not confirm or negate the hypotheses, they corroborate results found in other studies and help to understand the economic motivation for location choice.

Model 2 add the variable with the number of affiliates located in the same prefecture in Japan. The coefficient is positive and highly significant. This confirms Hypothesis 1, which said that a firm imitates other firms located in the same area of Japan.

Model 3 add one interaction variable that test how firms' previous entries may affect the imitation of behavior of other firms located in the same area. The variable is an interaction of the number of affiliates in the country from the same prefecture in Japan and an indicator for whether the firm has entered Europe before. If firms with experience imitate less, it should have a negative sign and be the same size to cancel the imitation effect. Both explanatory variables are highly significant with the expected signs and confirm the effect of imitation, which is weaker for experienced firms.

Model 4 shows the estimated coefficient of imitation of other firms that belong to the same reference group. This variable is the number of affiliates from the same industry in the focal country. The coefficient is positive and highly significant, which confirms hypothesis 2.

Model 5 includes another interaction variable to control for the effect of prior experience in Europe on the imitation of same industry behavior. The variable is an interaction of the number of affiliates in the country from the same industry in Japan and an indicator of whether the firm has entered Europe before. If firms with experience imitate less, it should have a negative sign and be of the same size to cancel the imitation effect. Both explanatory variables are highly significant with the expected signs and confirm the effect of imitation, which is weaker for experienced firms.

Model 6 tests hypothesis 3 adding the variable number of previous entries by the parent firm. A positive sign is expected indicating momentum from the first entry. The coefficient is highly

significant of large magnitude confirming the momentum effect on firms' entry decisions.

Model 7 joins the three explanatory variables, showing high significance when all are included in the same model. All variables keep the positive sign confirming the hypotheses, but the size of coefficients is different. We can see that the momentum effect is larger than the imitation variables.

Model 8 includes all variables such that we can compare the effect of each variable in the equation. This model tests the three hypotheses established earlier. In hypothesis 1 I want to verify if a firm imitates other firms located in the same area of Japan. In hypothesis 2 I am verifying if a firm will imitate previous entries of firms belonging to the same industry. Hypothesis 3 verifies if a parent firm repeats the same location for a subsequent entry. From the results shown in the table, we can see that all hypotheses-explanatory and interaction variables are highly significant, confirming the three hypotheses. This is the preferred model for the theory developed earlier.

A previous entry in Europe by a parent firm showed a significantly higher effect than the other explanatory variables (models 6 and 7 in table 3). If the other effect of previous entry reduced the effect of all other variables, the interaction variables (same prefecture in Japan x entered and same industry in Japan x entered), should have a negative sign. This was confirmed by the estimates. If previous entries completely eliminated imitation, the interaction variable should have the same magnitude (and opposite sign). Because the interaction variable did not cancel the effects, we see that belonging to the same location and industry back in Japan influences choice of location in Europe even for experienced firms.

The positive and highly significant sign of the explanatory variable on firm's behavior showed in model 8 confirms the three hypotheses. Organizations follow other firms that locate in the same area, that belong to the same reference group, and repeat their own past behavior. One interpretation of this result is that firms try to reproduce the same advantages of agglomeration they had found in their location in Japan. It is more likely that there will be spillovers of information concerning outward investment location. The result shows the importance of physical proximity within Japan in the decision of new entries, and confirms hypothesis one.

Tests for imitation of reference group firms show that belonging to the same industry has a positive and highly significant effect. The easiest way of gathering relevant information about markets is through competitors, and the behavior of firms on the reference group seems to have a

high influence on location choice. The hypothesis on mimetic behavior of reference group firms is thus confirmed, and it is the strongest effect on firms' behavior. The last tests for the momentum effect of the entry of the parent firm on affiliate choice. Parent firms repeating past experience shows a high increase on the probability of a country being chosen for a new affiliate location. The hypothesis on momentum is confirmed and the estimate shows a strong commitment on the firm's part to previous entry choices.

The sample was split into two sub-samples to check effects of a first entry and subsequent entries in Europe by Japanese firms. Because the momentum effect was larger than the effects of the other two explanatory variables on imitation, it was important to check for interference on the behavior of the other two variables. Splitting the sample isolates first entries from the subsequent entries permitting more accuracy in the interpretation of the results.

#### First Entry

Table 4 shows the estimation models for the first time a certain firm enters in Europe.

Insert table 4 around here

This table does not include the variable that counts the previous entries of a same parent firm because the momentum effect refers to further entries in a certain country. The results are similar to table 3.

In model 1 all control variables are highly significant and have the expected signs and show slightly higher effects.

Model 2 includes the variable that counts previous entries of firms from same location in Japan. The coefficient is positive and highly significant. The results are consistent with the hypothesis on imitation of firms located in the same area.

Model 3 includes the variable that counts previous entries of firms belonging to the same industry in Japan. The coefficient is positive and highly significant. The results are consistent with the ones found in the previous analysis and confirm hypothesis 2.

Model 4 joins the two hypotheses-explanatory variables and the control variables. We can see that the results are consistent with the ones presented in table 3. The explanatory variables have maintained their positive sign and are highly significant, confirming the established hypothesis.

### Subsequent Entries

Table 5 shows results for subsequent entries of affiliates in Europe.

Insert table 5 around here

We can see that in model 1 not all control variables are highly significant, unlike in the other two tables. The belief that firms save on search costs and rely more on other firms' behavior and their own behavior can be seen from the changes of significance of control variables when we split the sample and consider just the subsequent entries. Firms with experience in Europe learn to pay less attention to general economic conditions probably because they have access to specific local information on the vertical structure.

Model 5 includes all variables except the interaction variables. The hypotheses-explanatory variables have positive and highly significant coefficients. Similar to what we saw in model 8 in table 3, the entry of a parent firm in a certain nation in Europe shows a much higher effect than the other two explanatory variables. It is evident that the entry of the parent firm results in collection of information on market conditions that has a decisive effect on later choices. Clearly, once a choice of country has been made, the firm is committed to it and is likely to locate additional plants in the same country.

## DISCUSSION

The objective of this study was to add some new perspectives to the literature on the decision to locate a new plant in a foreign country. It brought some more evidence on the strategies used by Japanese firms entering Europe. Previous studies on Japanese investment in Europe had concentrate on the Single Market benchmark and its economical issues (Dunning and Cantwell, 1991; Yamawaki, 1995 and Yannopoulos, 1993). Although I observe the increase of investments around the discussion of the Single Market and the period after this behavior can be an answer to the raise of the yen, just reflecting the global increase of Japanese investments overseas. The decrease verified just after the 1992 may account for a general decrease on investment due to the bubble-burst financial crisis that is being affecting the Japanese economy for a decade. The

results obtained empirically in this paper corroborate studies on social and political embeddedness of the Japanese industrial structure (Lincoln, Gerlach and Ahmadjian, 1996). Networks of ties in the Japanese society are deeper and more diffuse than empirical research can detect. I contribute with more empirical results on how firms rely on similar organizations to make a choice for a new uncertain market.

When choosing a new location, firms usually gather information on markets and infrastructure of several nations. I am aware of the impossibility of correctly considering all relevant infrastructure measures and information that affect location decisions, after all nation effects are difficult to measure (Head, Ries and Swenson, 1995). However, they cannot be ignored for the purposes of the analysis. In this study, I coded common measures of location specificity as control variables in order to measure more accurately the effects of our explanatory variables.

The size and characteristics of domestic and adjacent markets are powerful location-specific variables influencing the industrial and geographical composition of market-seeking investment by multinational firms (Dunning, 1992). Significant effects showed that firms preferred to enter in more productive economies that provide better access to suppliers, communication and technological infrastructures, qualified labor, and marketing resources. However, it is interesting that this effect was not significant for the subsequent entries.

Low interest rates are generally seen as more attractive to a firm's decision to invest in a new manufacturing plant. Accordingly, I controlled for the price of money in host countries, expecting a negative effect of this variable. Although the Japanese industrial sector is known for its vertical integration and for the role of their financial institutions in sustaining a certain degree of intra-group dependence (Banerji and Sambharya, 1996), the results showed that for some models, lower money market rate is significant in location choice. However, this effect loses significance for the majority of models when the behavioral variables are introduced.

Variables related with the labor market infrastructure are not consistent through all models; labor cost and manufacturing employment lose significance in some of them. The positive and significant effect of unemployment rate was expected and supports the idea that access to available labor force influences location choice. High employment rates turn very often into a bargaining issue when negotiating with local governments eager to attract foreign investment and create jobs. The negative effect of labor costs confirms the search for low costs, but this variable

changes its significance in some models. This can be partially explained by the idea that Japanese investments in Europe have been described as more market oriented and less resource oriented.

The number of engineers' variable is positive and highly significant in all models where only control variables are included for all tables and also when considering the first entry. When managers can count on a solidly educated labor force they perceive their investments as less risky. The transmission of new technology, knowledge and management practices should be easier to transfer and absorb by highly educated workers. Therefore, a location is highly attractive for a Japanese affiliate if it has a good educational structure.

Manufacturing availability of labor force is positive and significant but loses significance when explanatory variables are included in the models. Japanese firms intended to exploit the economies of specialization and scale, efficiency-seeking investment, which is usually more capital or technology intensive, and where skilled labor, transport and communication costs are more significant (Dunning, 1992). However, this study shows that as soon as the behavioral aspects are included some of the effects are not significant anymore.

The results on control variables were conventional and the significance of control variables is also higher when I consider only first entries. However, the variables measuring strategies of assessing information and imitation behaviors are new and have very strong effects. Japanese firms behave as one might expect from decision-making under uncertainty, that is, they rely on easier information sources and are influenced by each other.

To some extent these behaviors would be surprising, as imitation of other firms is a reasonable reaction to extreme uncertainty, but seems imprecise when more accurate information is available. It has been argued that as firms become more internationalized, the uncertainty previously attached to producing in different cultures begins to fade and it has disappeared in the more globally integrated companies (Dunning, 1992). In the case of Japanese firms it seems getting more information is used to reproduce the industrial clusters that can be found in Japan.

Spatial proximity permitted more exchanges of information between decisions makers and may have determined the new location choice (Davis and Greve, 1997). Knowledge spillovers among firms seemed to occur locally (Jaffe, Trajtenberg and Henderson, 1993). So firms expect to transfer these networking advantages to a new location. Moreover, monitoring successful incumbents in a certain market makes it more attractive for similar firms to enter (Baum and



Haveman, 1997).

Past locational choices were repeated and demonstrated to have a powerful effect on new entries. A parent firm chooses the same location to establish new subsidiaries, relying on information collected earlier and avoiding uncertainty. In terms of policy planning, this is an important result. The results show a long-term commitment of the parent firm after entering in one location, so countries looking for foreign direct investment should know that if they pull in one manufacturing firm, there are great chances of it establishing more plants in the same location.

Firms repeat their previous locational choices, so these findings seem to modify the core-periphery model (Krugman, 1992; Leonardi, 1995). According to this model, entry is a two-step decision-making process where firms initially enter a core location option and subsequently enter peripheral countries. Here, even when I only considered the subsequent entries, the momentum effect has been the strongest one.

It also modifies the strategy defined by Balasubramanyam and Greenaway (1992) as bridgehead investment where new investments in England are regarded as a base from which supply the larger Europe. These previous perspectives do not explain why a peripheral country like Portugal is preferred to Austria for a first and second entry. The present findings suggest that imitation can influence entry decision favoring a peripheral country by firms that are not yet established in the so-called core countries.

This research can be extended in several directions. Would be interested to see if large organizations make their choices differently than small organizations (Greve, 2000) or if large organizations affect others more than small organizations (Haveman, 1993). Future studies could track the effective social contacts instead of geographical proximity to enhance the precision of the empirical analysis done here.

This research has important policy implications; as foreign direct investment of a scale such as the manufacturing plants studied here may have strong benefits for the local economy. Locals are hoping that the manufacturing sector have a more committed investment, better opportunities of technology and transfer of managerial ability, as well as more jobs. Moreover, the Japanese firms are particularly able to export organization-specific managerial techniques and product and process innovations (Barrell and Pain, 1999). The technology contribution of firms is not only their major source of advantage, but it is also probably their most desirable

attribute from the viewpoint of host countries (Hood and Young, 1979). In terms of policy making, if firms, by imitation of their reference group firms and following previous behaviors, are willing to choose the same location, countries seeking foreign direct investments should consider these findings when making strategies for attracting new investors.

Finally, I may say that the stepped-up Japanese investments in Europe may contribute to the current phase of industrial restructuring in Japan. The rich cultural diversities and creative human resources in Europe may be the new resources Japan needs in its search for ideas and knowledge to be used to satisfy the ever-diversifying tastes and needs of its own market (Ozawa, 1991). As foreign producers in Europe, Japanese firms face disadvantages as compared to local producers (Dunning, 1992). Products need to be adapted to local tastes or needs, and to indigenous resources and capabilities. However, familiarizing themselves with local cultures, business customs, legal requirements and marketing procedures makes the physical presence in the leading markets critical and brings added value to parent firms in Japan.

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Table 1: Variables Definition

Variables	Definition	Sources
1. Entry Choice	Independent variable country of choice	
2. GDP per Head	GDP per capita	OECD, National Accounts: Main Aggregates
3. Market Rate	Money Rate of lending money in the market	IMF, International Financial Statistics Yearbook
4. Unemployment Rate	Rate of unemployment	ILO, Yearbook of Labour Statistics
5. Labor Cost	Cost of labor per hour	ILO, Yearbook of Labour Statistics
6. Number of Engineers	of Number of engineers per thousand people	OECD, Main Science and Technology Indicators
7. Manufacturing Employment	Rate of employment in manufacturing sector	ILO, Yearbook of Labour Statistics
8. Same Prefecture in Japan	Number of firms from the same prefecture in Japan that have previously entered in the country of choice	Toyo Keizai Data Bank, Japanese Overseas Investments
9. Prefecture x Entered	Interaction variable of variables 8 and 13	
10. Same Industry in Japan	Number of firms from the same industry in Japan that have previously entered in the country of choice	Toyo Keizai Data Bank, Japanese Overseas Investments
11. Industry x Entered	Interaction variables 10 and 13	
12. Same Firm in Japan	Number of subsidiaries from the same firm in Japan that have previously established in the country of choice	Toyo Keizai Data Bank, Japanese Overseas Investments
13. Entered	Indicator variable set to one for a firm that has entered Europe before	

Table 2: Descriptive Statistics and Correlation Matrix

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Entry Choice	10.07	4.57	1.000												
2. GDP per Head	95.12	21.18	-.002	1.000											
3. Market Money Rate	9.68	4.13	-.012	-.518	1.000										
4. Unemployment Rate	9.21	4.70	-.007	-.447	-.020	1.000									
5. Labor Cost	17.36	5.72	-.004	.628	-.516	-.015	1.000								
6. Number of Engineers	4.04	1.58	-.008	.450	-.450	-.085	.760	1.000							
7. Manufacturing Employment	21.33	3.28	.012	.035	-.098	-.145	.147	-.020	1.000						
8. Prefecture in Japan	9.77	17.62	-.052	.023	-.112	.087	.157	.206	.103	1.000					
9. Prefecture x Entered	7.49	16.21	-.115	.020	.124	.077	.131	.182	.059	.860	1.000				
10. Industry in Japan	3.41	8.42	-.010	.026	.110	.043	.125	.198	.115	.517	.460	1.000			
11. Industry x Entered	2.51	7.49	-.080	.023	-.099	.035	.106	.169	.083	.483	.854	.860	1.000		
12. Parent Firm	0.08	0.53	-.071	.002	-.068	.038	.013	.035	.009	.072	.098	.072	.091	1.000	
13. Entered	1984.39	8.83	.134	.025	-.089	.032	.015	.071	-.084	-.042	-.008	.141	-.103	.139	1.000

**Table 3: Estimated Models of Locational Choice: Dependent Variable is Country Entry**  
Complete Sample of Affiliates (Conditional Logit)

Variables	model 1	model 2	model 3	model 4	model 5	model 6	model 7	model 8
<b>GDP per Head</b>	.980E-02*	.920E-02*	.669E-02†	.945E-02†	.782E-02†	.821E-02†	.683E-02	.498E-02
	(.417E-02)	(.467E-02)	(.469E-02)	(.457E-02)	(.465E-02)	(.433E-02)	(.493E-02)	(.503E-02)
<b>Market Money rate</b>	-.070**	-.017	-.022	-.037	-.042†	-.075**	-.039	-.042†
	(.024)	(.024)	(.024)	(.024)	(.025)	(.024)	(.025)	(.026)
<b>Unemployment rate</b>	.076***	.077***	.070***	.082***	.080***	.066***	-.741E-02	.069***
	(.011)	(.015)	(.015)	(.015)	(.015)	(.014)	(.019)	(.016)
<b>Labor Cost</b>	-.088***	-.015**	-.159E-02	-.021	-.997E-02	-.077***	-.149	-.024
	(.018)	(.019)	(.019)	(.019)	(.019)	(.019)	(.019)	(.020)
<b>Number of Engineers</b>	.414***	.224***	.185***	.238***	.204***	.388***	.177**	.104†
	(.053)	(.053)	(.052)	(.052)	(.053)	(.048)	(.056)	(.058)
<b>Manuf. Employment</b>	.050***	.024	.020	.020	.020	.031†	.523E-03	-.300E-02
	(.014)	(.015)	(.015)	(.015)	(.015)	(.015)	(.015)	(.015)
<b>Prefecture in Japan</b>		.036***	.072***				.019***	.045***
		(.214E-02)	(.617E-02)				(.264E-02)	(.608E-02)
<b>Prefecture x Entered</b>			-.042***					-.030***
			(.642E-02)					(.672E-02)
<b>Industry in Japan</b>				.073***	.165***		.046***	.125***
				(.430E-02)	(.014)		(.509E-02)	(.013)
<b>Industry x Entered</b>					-.108***			-.099***
					(.014)			(.015)
<b>Parent Firm</b>						2.298***	1.649***	1.811***
						(.157)	(.157)	(.158)
<b>Log Likelihood</b>	-1529.72	-1376.88	-1348.78	-1356.69	-1315.62	-1382.14	-1245.91	-1175.89

N=593 for all models

Standard errors are in parentheses

\*\*\*p<. 001; \*\*p<. 01; \*p<. 05 and †p<. 10



**Table 4: Estimated Models of Locational Choice: Dependent Variable is Country Entry**  
Sub- sample of First Entry Affiliates (Conditional Logit)

Variables	model 1	model 2	model 3	model
<b>GDP per Head</b>	.016*	.926E-02	.010	.798E-02
	(.627E-02)	(.677E-02)	(.683E-02)	(.709E-02)
<b>Market Money rate</b>	-.087*	-.034	-.054	-.034
	(.034)	(.034)	(.036)	(.035)
<b>Unemployment rate</b>	.086***	.064**	.075***	.066**
	(.028)	(.022)	(.022)	(.022)
<b>Labor Cost</b>	-.185***	-.088**	-.097**	-.060*
	(.028)	(.029)	(.029)	(.030)
<b>Number of Engineers</b>	.699***	.440***	.469***	.367***
	(.074)	(.079)	(.078)	(.084)
<b>Employment</b>	.060**	.032	.031	.020
	(.022)	(.022)	(.022)	(.022)
<b>Prefecture in Japan</b>		.037***		.021***
		(.338E-02)		(.390E-02)
<b>Industry in Japan</b>			.085***	.067***
			(.720E-02)	(.782E-02)
<b>Log Likelihood</b>	-732.42	-665.86	-638.62	-624.07

N=292 for all models

Standard errors are in parentheses

\*\*\*p<. 001; \*\*p<. 01; \*p<. 05 and †p<. 10

**Table 5: Estimated Models of Locational Choice: Dependent Variable is Country Entry**  
Sub-sample of Subsequent Entry Affiliates (Conditional Logit)

Variables	model 1	model 2	model 3	model 4	model
<b>GDPper Head</b>	.489E-02 (.574E-02)	.954E-02 (.666E-02)	.834E-02 (.634E-02)	.338E-02 (.623E-02)	.826E-02 (.703E-02)
<b>Market Money rate</b>	-.068* (.034)	-.019 (.034)	-.040 (.035)	-.074* (.036)	-.050 (.037)
<b>Unemployment rate</b>	.074*** (.019)	.092*** (.021)	.090*** (.020)	.058** (.020)	.086*** (.022)
<b>Labor Cost</b>	-.014 (.024)	.043† (.025)	.038 (.025)	.010 (.025)	.059* (.026)
<b>Number of Engineers</b>	.206** (.062)	.038 (.053)	.055 (.071)	.142* (.067)	-.019 (.082)
<b>Manufacturing Employment</b>	.040* (.019)	.010 (.021)	.469E-02 (.020)	-.486E-02 (.021)	-.032 (.022)
<b>Prefecture in Japan</b>		.037*** (.291E-02)			.020*** (.374E-02)
<b>Industry in Japan</b>			.067*** (.545E-02)		.028*** (.711E-02)
<b>Parent Firm</b>				2.30*** (.160)	1.76*** (.161)
<b>Log Likelihood</b>	-780.49	-696.10	-698.85	-636.95	-594.39

N=301 for all models

Standard errors are in parentheses

\*\*\*p<. 001; \*\*p<. 01; \*p<. 05 and †p<. 10

