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Drivers of Key Competences within Foreign Subsidiaries:

The case of MNEs in Japan

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Abstract

Evolving roles of foreign subsidiaries have been the object of much academic research, pointing to a rise in the position of units within the MNE global network. In this paper, key drivers of core competences held by foreign subsidiaries in the dynamic and competitive host environment of Japan are explored, and the following research questions are addressed: “What are the core competences of foreign subsidiaries located in Japan?” and “What are the key drivers explaining why foreign subsidiaries located in Japan possess such competences?” To answer these questions, an original longitudinal database was compiled from two waves of surveys conducted amongst foreign subsidiaries operating in the Japanese manufacturing sector. Results show that core competences developed are predominantly sales and marketing competences, but also in Support Functions and Innovation. Subsidiary-level drivers (notably the role of autonomy), internal interaction and external network factors contribute to competence development. The results demonstrate that the breadth of functional activities performed at subsidiary level matters, and not all factors explain to the same extent whether subsidiaries perform a single or multiple functional activities in the case of Japan.

Key Words

Foreign Subsidiaries, Core Competences, Japan, Internal Network, External Network, MNEs

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Introduction

Evolving roles and contributions of foreign subsidiaries within multinational enterprises has been the object of much academic research. The extant literature has focused on the rising power of foreign subsidiaries within the multinational global networks, partly as a result of tasks and roles initially assigned by headquarters but also increasingly through initiatives taken by subsidiaries themselves that would have the ability to contribute to the MNE performance, through new knowledge generation and innovation (Cantwell and Mudambi, 2005; Awate et al. 2015; Baaij et al., 2015; Liu, 2019). A variety of key terms have been used to describe foreign subsidiaries with the ability to create new knowledge and influence the competitive success of the multinational firm; in this paper, we focus on the development of core competences by foreign subsidiaries and explore the key drivers in the case of Japan.

Both internal and external factors contribute to individual subsidiaries creating key competences. Firstly, competence creation will result from strategic decision making within the headquarters, as well as the global strategic orientation adopted by the firm (Frost et al., 2002; Yamin and Andersson, 2011). Secondly, competence creation also results from the unit's embeddedness in the local host country. Studies have long emphasised the role of the local institutional environment, as well as the competitive nature of the host economy in facilitating competence development of individual subsidiaries (Holm et al., 2005; Asmussen et al., 2009b; Balagun et al., 2011). From a theoretical perspective, this means that subsidiaries can evolve from being dependent upon HQ resources to generate key knowledge that is in turn recognised and utilized by HQs (Kostova et al., 2016). Subsidiaries are subject to two-way resource interdependencies – balancing internal embeddedness

within the MNE network and external embeddedness with local business network - (Birkinshaw et al., 2005; Forsgren et al., 2005; Najafi-Tavani et al., 2014; Baraldi and Ratajczak-Mrozek, 2019), which can, under specific circumstances, result in unique competence development (Scott-Kennel and Giroud, 2014). Predominantly based on the MNE network theory, this study questions the factors that explain when individual subsidiaries possess unique core competences, balancing between HQ-assigned key role versus local institutional factors in the creation these competences (Jarillo and Martinez, 1990; Tippman et al., 2018; Minbaeva and Santangelo, 2018), very much in line with the concept of functional upgrading at subsidiary-level (Burger et al., 2018).

The context selected for this study is that of Japan. Japan has long been recognised by many MNEs as a key location for intelligence gathering, close interaction with key global competitors, and as a dynamic location for new innovations. Over the past few decades, Japan has positioned itself as a main source of global outward FDI, and in 2018, it was the largest country in terms of outward FDI flows. Reversely, but perhaps less known, Japan attracts a steady flow of inward FDI. In 2018, Japan attracted a total of US\$9.8 billion of inward FDI flows. Total inward FDI stocks in Japan have quadrupled over the past two decades, up from just over US\$50 billion in 2000 to US\$213.7 billion in 2018 (UNCTAD, 2019). Despite rising inward FDI, there is surprising little known about the role and activities of foreign subsidiaries in Japan, and the importance of these subsidiaries for their MNE network. This research therefore goes some way to exploring the competences of foreign subsidiaries in this highly competitive environment.

This paper addresses the following research questions: “What are the core competences of foreign subsidiaries located in Japan?” and “What are the key drivers explaining why foreign subsidiaries located in Japan possess such competences?” To answer these questions, an original longitudinal database was compiled from two waves of surveys conducted amongst foreign subsidiaries operating in the Japanese manufacturing sector. Initial models are used to explore key factors explaining when firms demonstrate core competences. Our models show that core competences developed by foreign

subsidiaries in Japan are concerned mainly with sales and marketing competences, but also in management and innovation. Subsidiary-level drivers (notably the role of autonomy), internal interaction and external network factors contribute to competence development. The results demonstrate that the breadth of functional activities performed at subsidiary level matters as subsidiaries with production and upstream logistics activities are more likely to successfully develop R&D and innovation competences that would be recognised and utilized by other units of the multinational. – Importantly, not all factors explain to the same extent whether subsidiaries perform a single or multiple functional activities. Subsidiaries with more autonomy, significant internal network integration, and external network breadth are more likely to demonstrate a wider scope of core competences, whilst greater psychic distance has a negative impact on the likelihood of subsidiaries developing innovation competences.

This paper is structured as follows. The next section presents the background to inward FDI in Japan and factors explaining why Japan is attractive to foreign investors. Key theories and the conceptual framework used in the research follow with the development of hypotheses. The methodology section then describes the data collection, models specifications, measurement of variables and the estimation strategy. Empirical results are presented then after. The final section concludes by further interpreting the results, highlight knowledge contributions and suggest avenues of future research.

Background to Foreign Investment in Japan

Japan is best known as a major global investor, with rising outflows of FDI since the late 1980s, and Japanese MNEs becoming the largest investors in the world in 2018, despite a decline in outward FDI of 11 per cent to \$143 billion (UNCTAD, 2019: 6). Less is known about Japan as a recipient for foreign investment, yet, in 2018, Japan attracted a total of US\$9.8 billion of inward FDI flows and was host to US\$213.7 billion inward FDI stocks (UNCTAD, 2019). FDI inflows to Japan increased in

the late 1990s, with some sharp changes in performance throughout the 2000s, and a steady pace in the 2010s (see Figure 1).

INSERT FIGURE 1 HERE

European countries and North America are the two largest investor groups in Japan. In 2017, Europe accounted for 49.4% of inward FDI stocks, and North America 24% (see Table 1). The majority of FDI is directed to the manufacturing sector (71.8%), particularly the transportation equipment sector (29.2% of total inward FDI stocks) and the electric machinery sector (23.6%). By country, the largest investors are the Netherlands (with 80% of its investment concentrated in the electrical machinery sector), France (with 70% of its investment directed at the transportation equipment sector), and the USA (with the majority of its investment concentrated in the finance and insurance industry). Asian countries have recently become the fastest-growing foreign investors, and accounted for just under one fifth of inward FDI stock in 2017. Asian investors tend to invest in new sectors such as Sharing Services, Startup Accelerators and FinTech.

INSERT TABLE 1 HERE

The rise in inward FDI in the 1990s reflects changes implemented by the Japanese government in terms its inward FDI promotion measures and policies adopted in the 1980s in an effort to attract more foreign investors. Following the collapse of the bubble economy and subsequent economic slowdown in Japan, a general framework was developed at the national level to facilitate MNEs' operations, to revitalize the Japanese economy and to promote structural reform. With regards to FDI, active FDI policies were implemented at the local and regional levels to enhance foreign capital in 1996. At the national level, this is exemplified by the following: 1) legislative measures designed to reduce the burden of initial costs facing foreign companies, 2) the establishment of the Japan Investment Council (JIC) in July 1997 to simplify investment processes; and 3) improvements to the environment of M&A activities. At the local and regional levels, this is exemplified by 1) the host of

“Regional Japan Investment Council” – with individual councils offering targeted monetary incentives to boost activities in existing industrial clusters (eg. the automotive industrial cluster in the Aichi-prefecture), and 2) the provision of information on industrial real estate.

More recently, one can distinguish two waves of liberalisation and facilitation policies in Japan. In the early 2000s, the Japanese government and ministries agreed to cooperate in investigating and implementing a set of measures to promote FDI into Japan¹. One of the government’s goals was to double FDI stock into Japan within the next five years. In order to achieve the goal, in 2003, the JIC Expert Committee publicized the “Program for the Promotion of FDI into Japan”. Wada (2005) summarizes key measures adopted, namely 1) implementation of the easing of rules on payment for M&A, which would expedite the process of M&A by foreign companies, 2) creation of tax incentives in IT and R&D to reduce the tax burden of companies, 3) improving transparency and reliability of corporate information, 4) introducing electronic reporting system on investment applications required by the Foreign Exchange Law, 5) improving basic proficiency in English and communication ability based on cross-cultural understanding of Japanese citizens, and 6) strengthen the providing information to foreign press, embassies, and consulates and publicizes the successful experiences involving FDI into Japan. In order to implement the above program, a general contact information network (“Investment Japan”) was set up within the government and concerned ministries to facilitate information gathering by investors.

The second wave of changes in policies occurred in the early 2010s. The government focused on attracting foreign human and technological capital to Japan in a drive to create job opportunities and raise innovation. In 2013, the government launched the "Japan Revitalizing Policy 2013", with a

¹ This resulted from rising concerns that stagnation of the Japanese economy, declining birthrates and aging population would induce a continuous shrinkage of household savings, with a resulting decline in funds for business investments.

specific target to double inward FDI, a target reconfirmed in the "Japan Revitalizing Policy 2016"². To achieve these goals, specific actions adopted include: 1) Assistance for fund raising for SMEs, 2) Acceleration of patent examinations (from 22 months to 2 months), 3) Reduction in patent examination and patent fees for SMEs, 4) Shortened investment procedures (from 30 days to 2 weeks), and 5) Acceleration of residency status (from 1 month to 10 days). As of 2019, the incentive program for foreign MNEs offered by the Japanese government focuses on attracting investment in targeted zones, encouraging foreign affiliates activities in higher value added activities such as R&D and innovation, and facilitating inflow of highly qualified employees (see Table 2).

INSERT TABLE 2 HERE

Beyond government policies, one of the main reasons why foreign investors are attracted to Japan is the comparatively high rate of return on inward FDI (see Figure 2). In a survey of foreign-affiliated companies conducted by JETRO in 2018, over two thirds of respondents ranked the Japanese market as "Profitability is high" or "Profitability is somewhat high". Of course, Japan's high rate of return reflects the financial health of the foreign MNEs that choose to invest there (JETRO, 2018)³. Overall, compared to other developed economies, the OECD ranked Japan as third out of 22 countries for rate of return on inward FDI in 2016.

INSERT FIGURE 2 HERE

In addition to the high rate of return, other reasons why foreign investors are attracted to Japan are highlighted in the latest survey by JETRO (see Table 3). The attractiveness of the Japanese market and the presence of suitable partners (including business partners or others, and the presence of renown global companies), country stability, and the technological environment (incl. for technology

² Invest Japan (https://www.mofa.go.jp/mofaj/gaiko/tn_toshi/index.html) accessed on 1 May 2019.

³ Also, the absolute value of inward FDI in Japan is still fairly small compared to other countries, so this could make the rate of return higher as a calculated result.

or products, local R&D, infrastructure). The latest survey published by METI support these findings, highlighting the most influential factors affecting expansion of business in Japan, namely market size (eg. high income level, large market size of customers for products and services) and related opportunities, such as “Providing grounds for measuring competitiveness of new products and services” or “Presence of sophisticated customers”, and “Extensive infrastructure” (METI, 2019).

INSERT TABLE 3 HERE

In the JETRO survey, two fifth of subsidiaries answered that Japan’s mid- to long-term growth potential is attractive; one fifth report that opportunities for innovation due to Japan's status as a frontrunner in addressing global challenges are attractive; and just over one tenth of subsidiaries see the geographical location of Japan as attractive namely because it is convenience for developing business with other Asian markets.

The next section presents theoretical justification behind the development of core competences within foreign subsidiaries, and puts forward some hypotheses as to what explains when a subsidiary located in Japn develops core competences.

Drivers of Core Competences: Theory and Hypotheses

Today, MNE subsidiaries are no longer viewed as “periphery” entities (Holm and Pedersen, 2000) that conduct low-value adding activities. Foreign subsidiaries have emerged as significant contributors to knowledge, innovation, and value creation for the entire MNE (Gupta and Govindarajan, 2000, 2003; Asmusen et al., 2009b). The rising position of some subsidiaries manifests itself by the emergence of Centers of Excellence, or by the fact that many subsidiaries create unique competences that are recognised by the HQs or other units in the MNE. Centres of Excellence can be defined as MNE units that (1) possess strong competences (technical, market, or managerial competences); (2) are recognised by other units of the MNE as possessing these competences (eg. by headquarters and

divisions/business units); and (3) these competences are/can be used by other internal units within the MNE network (Forsgren and Andersson, 2000; Frost et al., 2002; Reger, 2004; Baraldi and Ratajczak-Mrozek, 2019). Thus, a subsidiary possesses core competences if those are explicitly recognised as superior competences and applied in other units of the MNEs (Gonzalez et al., 2014).

Subsidiaries that have a Centres of Excellence position do not do so across all business functions; they usually excel in one or more functions, across R&D, production, marketing and purchasing (Holm and Pedersen, 2000), and competences in R&D and in purchasing are less frequent. Subsidiaries either possess *single-functional* or *multifunctional* key competences (Burger et al., 2018; Mudambi et al., 2018).

Because knowledge and resource interdependencies take time to develop, rather than focusing on *ex-ante* factors (ie. initial conditions that contribute towards the creation of centres of excellence (eg. Andersson and Forsgren, 2000; Birkinshaw and Hood, 1998), this research adopts a dynamic view by exploring internal and external factors that facilitate the development of core competences. Key competences themselves are not static; the achieved degree of intensity and importance as a centre of excellence is dynamic. Increases or decreases in competences over time reflect the evolving position of the subsidiary within the MNE network (Baraldi and Ratajczak-Mrozek, 2019).

The potential for a subsidiary to develop core competences is well documented in the extant literature, including the analysis of the external pressures that grant a special position and competences to a business unit. The MNE literature has focused on *both* internal and external relationships, and how these explain when a subsidiary emerges as a centre of excellence, and when this results in the development of a core competence and benefits the MNE network (Asmussen et al., 2009a; Borini and Fleury, 2011). Firstly, a subsidiary's own resources, competences and entrepreneurial efforts prevail. Secondly, internal and external relationships also matter.

A key enabler for individual units within the MNE to develop their own competences is their ability to

take decisions autonomously. White and Poynter (1984) initially identified ‘strategic independent subsidiaries’; that is, the most competent MNE subsidiaries based on how much these subsidiaries could expand ‘value added scope’ and ‘market scope’ for the MNE. Taggart (1998) extended this proposition by suggesting that the notion of competent MNE subsidiaries is partly based on how much market scope the MNE subsidiary has; but ‘scope expansion’ of a given MNE subsidiary may materialise only when the MNE gives it the freedom to do so. Thus, subsidiary autonomy can be viewed as an input for subsidiary development rather than as an antithesis of control and an outcome that subsidiaries may be striving for (Birkinshaw and Pedersen, 2009). Increased autonomy allows the subsidiary to form stronger external network linkages in the host environment (Birkinshaw et al., 1998; Andersson and Forsgren, 2000; Jindra et al., 2009), and autonomy enhances its ability to identify and pursue interesting market opportunities without explicit permission from the parent company (Frost et al., 2002; Najafi-Tavani et al., 2014). Cantwell and Mudambi (2005) suggest that beyond strategic independence per se, it is the manner in which strategic independence is used by the subsidiary in order to develop competence-creating mandates that matters. Thus the first hypothesis is:

Hypothesis 1: ‘The greater a subsidiary’s autonomy in Japan, the higher its breadth and scope of core competences’.

Internal MNE relationships with the parent firm and other subsidiaries/business units within the same MNE influence foreign subsidiaries in numerous ways. For instance, the types and size of resources transferred and shared by the HQs can lead to a subsidiary capability development (Kostova et al., 2016); specifically, HQs often act as providers of tangible resources in the MNE. HQ investment is a precondition for MNE subsidiaries to acquire and improve their capabilities, and HQ investment can be considered to be a cumulative and evolutionary process for foreign subsidiaries (Frost, Birkinshaw, and Ensign, 2002). Other units of the MNEs can also provide a source of competences, for instance as a source of intangible knowledge flows (Frost et al., 2002). This is essentially because relationships

within the internal network are characterised by resource, or knowledge, interdependencies (Forsgren, Holm, Johanson, 2005). Social and knowledge interdependencies are key enablers for intra-firm knowledge sharing (Harzing and Noorderhaven, 2009; Minbaeva and Santangelo, 2018), but also in enhancing visibility of subsidiaries vis-à-vis its HQs, which, in turn, may result in enhanced resource transfer towards the subsidiary (Dellestrand and Kappen, 2012; Kostova et al., 2016), acting as conduit for an evolving role by the subsidiary within the MNE (Balagun et al., 2011). These interdependencies play an essential role in successful network relationships. Internal relational and informational factors are associated with such network knowledge interdependencies inasmuch as these enhance internal knowledge development and sharing (eg. when HQs invest resources in a subsidiary, or with the presence of expatriates). Central to this are the types and intensity of relationships established by subsidiaries with other units of the MNEs. Thus, the second hypothesis is:

Hypothesis 2: ‘In Japan, the greater a subsidiary’s internal network breadth & integration within the MNEs (in terms of HQ investment, internal embeddedness, and internal integration), the higher its breadth and scope of core competences’.

With regards to the external network, the local environment in which foreign subsidiaries operate influences firms’ competences in many ways; external relationships with business partners along the value chain or with governmental bodies in the local business environment motivate the development of unique, adapted competences in response to the potential knowledge absorption and exploitation offered by the host environment (Monteiro and Birkinshaw, 2017). These lead to the development of unique subsidiary specific advantages (Rugman and Verbeke, 2001; Scott-Kennel and Giroud, 2014; Santangelo et al., 2019), enhance innovativeness (Frost et al., 2002), and future competitiveness of the subsidiary. External resource and knowledge interdependencies enhance the subsidiary’s ability to identify, capture and absorb relevant external knowledge (including ease of recruiting local talents, or when the local competition is high). Our third hypothesis is:

Hypothesis 3: ‘The greater a subsidiary’s external network integration in Japan, the higher its breadth and scope of core competences’.

The following section presents the methodology adopted to test the hypotheses developed above.

Methodology

Data

Data analysed in this paper was collected by means of survey amongst foreign subsidiaries in the manufacturing sector in Japan. The Toyo-Keizai database was used to identify firms; the database lists over 3,000 subsidiaries of non-Japanese MNEs operating in Japan. Two waves of data collection were conducted, the first one in 2006, and the second in 2016. Sampling criteria used were (1) firms had to operate in the manufacturing sector, (2) with a foreign ownership ratio of at least 33.3%. The research focuses on the manufacturing sector, because it attracts the majority of FDI in Japan, and given the high level of profitability of foreign firms in this host economy, the breadth and scope of core competences seems a pertinent phenomenon to explore in this context.

The questionnaire was initially pilot tested prior to the first wave of survey in 2006 amongst 50 randomly selected MNEs, ensuring that the distribution of the size and the origin of the MNE was congruent with the overall sample. Following this initial phase, some questions were rephrased to ensure understanding by respondents. The questionnaire was initially developed in English, before being translated in Japanese by an official translator. Respondents were given the choice to answer in either English or Japanese. Nearly all respondents chose to answer in Japanese (94.8% of respondents for the first wave in 2006, and 92.4% of respondents for the second wave in 2016).

The survey was addressed to the subsidiary CEO (or similarly high level position). The first survey took place in 2006, a total of 1,438 foreign subsidiaries were targeted using the sampling criteria discussed above; a total of 134 useable responses were received (a response rate of 9.3%). The second

wave of data collection took place in 2016, a total of 1,141 foreign subsidiaries were targeted; a total of 210 useable responses were received (a response rate of 18.5%). To increase the response rate, external endorsement by the Japanese Management Association was obtained and a careful procedure to contact respondents was adopted. Firstly, an initial telephone call was used to confirm the name of the CEO or equivalent or to amend accordingly. Secondly, for both waves of surveys, the questionnaire was initially sent to all respondents, followed by a follow up letter around 10 days later. The higher response rate for the second wave of data collection can be explained because of an additional endorsement and support by a local host higher education institution (Keio University). The final database used in this research is composed of a total of 193 useable cases extracted from both waves of surveys (removing all cases where relevant questions showed missing values).

In terms of the respondents, the majority were CEO / Presidents level (37% in the sample collected in 2006, and 36% for 2016), whilst other respondents were general managers or senior managers in the firm. The overall sample is composed predominantly of small and medium size MNEs. In terms of size, firms' average annual sales was somewhat higher in the first wave of survey (14,363 Million JPY on average for firms responding to the survey in 2006, against 12,154 Million JPY in 2016), but the average number of employee was higher in the second wave (an average of 87 employees in 2006 against 139 in 2016).

Models and an Estimation Strategy

Our analysis aims to determine factors explaining breadth and scope of core competences in foreign MNE subsidiaries. In order to identify these factors, the breadth and scope of core competences are used as dependent variables as identified based on subsidiary's self-recognition. There are seven independent variables and we refer to their coefficients so as to determine whether corresponding hypothesis is supported in the Japanese data or not. Although important, the level of investment from the HQ was not used in the models, as it was highly correlated to other variables. The Models are

estimated by OLS and multinomial logic regressions.

$$\begin{aligned} \text{Breadth of Core Competences} = & \alpha + \beta_1 \text{Autonomy} + \beta_2 \text{Internal Network} + \\ & \beta_3 \text{Integration} + \beta_4 \text{Expatriate Ratio} + \beta_5 \text{Cross-Functional Teams} + \\ & \beta_6 \text{External Network} + \beta_7 \text{Psychic Proximity} + \beta_8 \text{Controls} + \varepsilon \end{aligned}$$

Dependent Variables

Adapted from Burger et al. (2018), the dependent variable is based on subsidiaries' self-recognition as to whether a functional activity is a *core competence* or not for 9 functions, namely in: Basic Research, Applied Research, Products Development, Production of Goods & Services, Sales & Marketing, Logistics & Distribution, Procurement, Human Resources Management, International Strategy Development. Breadth and Scope is measured in two ways. First, the dependent variable in the OLS model reflects the number of core competences ($=\sum_{j=1}^9 A_j$) ranging from 1 (one core competence) to 9 (subsidiary possesses all 9 core competences). Second, we further identify when the subsidiary's competence is single- or multi-functional– using a binary dependent variable with 0 (the subsidiary only has one core competence in Sales and Marketing) or 1 (the subsidiary has a core competence in Sales and Marketing as well as other core competences). All subsidiaries reported at least one core competence, with Sales and Marketing being the most widely recognised as core competence by all firms. To identify relevant multi-functional groups, a factor analysis is conducted by principal component analysis. Internal consistency was evaluated by Cronbach's alpha. Using this method, three types of *core competences* were identified, namely *Innovation Competence* (showing an internal consistency $\alpha= 0.788$, highlighting competence in Basic and Applied Research, Product Development, Production of Goods & Services, and International Strategy Development, this is computed as 0 – not a competence, or 1 for firms with competences in all 5 items), *Support Functions Competence* (showing an internal consistency $\alpha= 0.6522$, highlighting competence in Logistics & Distribution, Procurement, Human Resource Management, this is then computed as 0 –

not a competence, or 1 for firms with competences in all 3 items), and *Sales & Marketing*. Multinomial Logic Regressions are run, with dependent variables as dummy variables, taking the value of 0 for firms with a single core competence in Sales and Marketing, or 1 with Multi-functional competences (Competence in Sales and Marketing AND Innovation Competence; Competence in Sales and Marketing AND Support Function Competence; Competence in Sales and Marketing AND Innovation Competence AND Support Function Competence).

Independent Variables

Independent variables include measurements for subsidiary autonomy, external and internal network breadth, knowledge management, level of integration, expatriate ratio and psychic proximity.

Subsidiary Autonomy: Following other studies (eg. Frost et al., 2002; Cantwell and Mudambi, 2005; Jindra et al., 2009), autonomy is defined as the decision-making power held by the MNE subsidiary. Respondents were asked to answer on 5-point Likert scales (ranging from 1- No decision autonomy to 5- Full decision autonomy), how much decision-making autonomy the subsidiary had in Japan in terms of: i) Promotion and hiring of top management in Japan, ii) Entering new markets within Japan, iii) Entering new markets outside Japan, iv) Changes of internal organization in Japan, v) New Supplier Selection, vi) Business Planning in Japan, vii) Advertising in Japan, viii) Investment/CAPEX in Japan, and ix) Business Operation in Japan. The final measurement for Subsidiary Autonomy is the mean of these items.

Internal Network Breadth: Internal network breadth is defined as the role of the HQs and other units of the MNEs in supporting the development of core competences in the subsidiary in Japan. Respondents were asked to answer on 5-point Likert scales (ranging from 1- Not at all to 5- Very Much), the extent to which internal units influenced the development of core competences of the firm including: i) Corporate HQs, ii) Specific Corporate Research Units, iii) Specific Internal / Corporate Customers, iv) Specific Internal / Corporate Suppliers. The final measurement for Internal Network

Breadth is the mean of these items.

Integration: To measure Internal Integration, respondents were asked to answer on 5-point Likert scales (ranging from 1- Not at all to 5- Very Much), the extent to which various business functions conducted by the Japanese subsidiary are integrated within the MNE global system, including: i) Purchasing Process in Japan, ii) Manufacturing Process in Japan, iii) R&D Functions in Japan, iv) Marketing Activities in Japan. The final measurement for Internal Integration is the mean of these items.

Expatriate ratio: The independent variable Expatriate Ratio is measured by assessing how many expatriates within the HQs are working in the Japanese subsidiary against the total number of employees in the subsidiary.

Cross-functional Team: Respondents were asked whether the firm engages in knowledge-sharing with other units of the MNEs, namely by having cross-functional teams (1 - None, 3 - Ad Hoc, 5 – Permanent): i) Within the Japanese subsidiary, ii) Within the same Global Business Unit, iii) Within Asia, iv) Globally. The final measurement for Cross-Functional Team is the sum of these items.

External Network Breadth: External network breadth is defined as the role of external business partners in Japan in supporting the development of core competences in the firm. Respondents were asked to answer on 5-point Likert scales (ranging from 1- Not at all to 5- Very Much), the extent to which external business partners influenced the development of core competences of the firm including: i) Customers, ii) Suppliers, iii) Distributors, iv) External Research Units, and v) Government Institutions. The final measurement for External Network Breadth is the mean of these items.

Psychic Proximity: Psychic proximity provides a measure of relational factors externally within Japan. It is defined as the ease (or difficulty) with which foreign subsidiaries can recruit talents in Japan, whether business networks are open (or closed), and whether there are suitable provisions of (or lack

of) business school graduates (Japanese or foreign) in Japan, and how this supports the development of competences. Respondents were asked to answer on 5-point Likert scales (ranging from 1- Not at all, to 5- Very Much), the extent to which external relational factors influenced the development of core competences of the firm.

Empirical Results

Table 4 summarises our findings from the OLS model and the 3 Multinomial Logic regression models. In Model 1, the dependent variable is a measurement of the breadth of core competences (eg the number of core functions for which the subsidiary demonstrates a core competence). Single or multi-functional competences are identified as sole competence in Sales and Marketing, versus Competence in Sales and Marketing and Core Competence in Support Functions (Model 2-1), Competence in Sales and Marketing and Core Competence in Innovation (Model 2-2), and Competence in Sales and Marketing and Core Competences in Support Function and Innovation (Model 2-3).

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Following Hypotheses 1-3, models test whether core competences by foreign subsidiaries in Japan are explained by subsidiary-level autonomy, internal network breadth and integration, and external network integration. Overall, the breadth of competences for firms that answered the second wave of survey in 2016 is higher than that of firms that answered in 2006, indicating that foreign subsidiaries' profile and importance within their MNEs has increased (see Figure 3). Some 60% of firms in the sample report having a Single-Functional core competence in Sales and Marketing, whilst 40% of firms have Multi-Functional core competences (see Table 5).

INSERT TABLE 5 HERE

In Models 1, 2-1 and 2.3, coefficients for Subsidiary Autonomy are positive and significant (see Table 4). This shows strong support for Hypothesis 1, even though the same variable is not supported in Model 2-2. This means that autonomy determines the breadth and scope of core competences of foreign subsidiaries in the manufacturing sector in Japan. Hypothesis 2 focuses on internal network breadth and integration between the Japanese subsidiary, its HQs and other units of the MNEs. Although internal network breadth is not significant, coefficients for internal integration mechanisms are positive and significant in Models 1 and 2-2; coefficients for cross-functional teams is significant and positive in Model 1, whilst coefficients for Expatriate Ratio are positive and significant in Models 1 and 2-3. Thus, although not all independent variables are significant, we find support for Hypothesis 2, and specifically, we confirm there is a positive relationship between Internal Network Integration and the breadth and scope of core competences of subsidiaries in Japan.

Surprisingly, we find little support for Hypothesis 3, although the coefficient for External Network Breadth is positive and significant in Model 2-3, the coefficient for Psychic Proximity is negative in Model 2-2. In the other models, the coefficients are not significant. Thus, we only find partial support for Hypothesis 3.

Discussion and Conclusions

The findings presented above help better understand when a subsidiary develops Single- or Multi-Functional core competences. Firstly, although the variable could not be included in the models because of multi-collinearity, there is a strong correlation between a subsidiary's breadth and scope of core competences and HQ investment. This supports results of previous research (eg Cantwell and Mudambi, 2005), and the prime importance of parent firms' investment in explaining core competences at the level of subsidiaries in host countries. It means that despite increasing decentralisation strategies by MNEs, in the case of foreign subsidiaries located in Japan, firm-specific advantages are still bounded mainly in the home country and becomes the seed of sustainable

competitive advantage.

Secondly, in order to develop core competences, foreign subsidiaries need to have a high degree of autonomy in their decision-making. Not all studies support this finding, for instance, Frost, Birkinshaw, and Ensign (2002) found that subsidiary autonomy was not important in the formulation of centres of excellence in Canada. One explanation could be that, in the specific case of Japan as a host country, local business factors require that foreign subsidiaries operate sufficiently autonomously in order to develop core competences in specific functional activities. Overall, these results point to the need for subsidiaries to strike a good balance between the resource dependence on their HQs and gaining autonomy in their activities in Japan.

Thirdly, we find support for Hypothesis 2. This finding is consistent with predictions of the resource dependence theory. What is new in our finding is that HQ's integration and organisational strategy for monitoring and control, including cross-functional integration strategy, is key to explaining the breadth and scope of core competences of foreign subsidiaries in Japan.

Overall, our empirical results in Japan are theoretically consistent with existing insights about the formulation of core competences in MNE subsidiaries in overseas locations. In particular, we find that a greater level of realised autonomy in order to be responsive to local market demands and technological opportunities is essential for the development of core competences of MNE subsidiaries. What is surprising, however, is the fact that external networks may not be so important for foreign subsidiaries' competences in Japan, despite the fact that Japan is a highly networked economy. This calls for further research into understanding the role and competences of foreign subsidiaries in Japan, and the specific locational advantages this country offers for MNEs.

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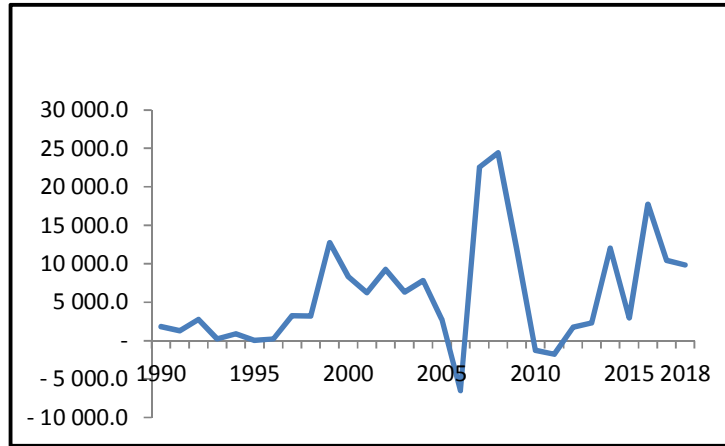
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ANNEX

Figure 1: FDI Inflows in Japan, 1990-2018, US\$ Million



Source: UNCTAD FDI database, as of June 2019.

Table 1 - Share of inward FDI stock in Japan by region and industry, 2017

Europe (49.4%)	Manufacturing 71.8%	<ul style="list-style-type: none"> ● Transportation equipment 29.2% ● Electric machinery 23.6% ● Chemicals and pharmaceuticals 10.5 % ● Others 8.5%
	Non-manufacturing 28.2%	<ul style="list-style-type: none"> ● Finance and insurance 24.5% ● Others 3.8%
North America (24.0%)	Manufacturing 16.3%	<ul style="list-style-type: none"> ● Food 4.2% ● Electric machinery 4.1% ● Others 8.0
	Non-manufacturing 83.7%	<ul style="list-style-type: none"> ● Finance and insurance 51.5% ● Others 32.2%
Asia (18.6%)	Manufacturing 15.1%	<ul style="list-style-type: none"> ● Chemicals and pharmaceuticals 6.3% ● Other 8.8%
	Non-manufacturing 84.9%	<ul style="list-style-type: none"> ● Finance and insurance 36.1% ● Services 9.0% ● Wholesale and retail 6.9% ● Real estate 5.4% ● Others 27.4%

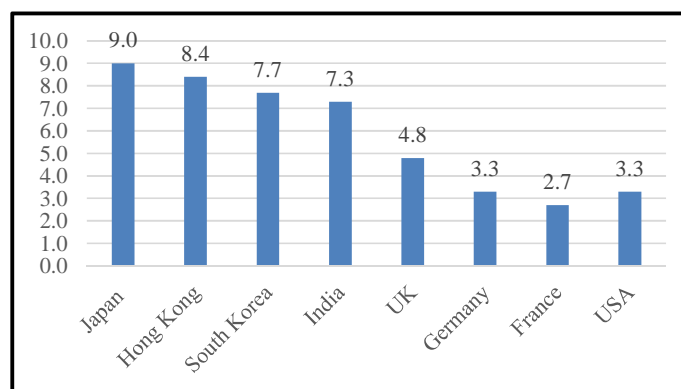
Source: Ministry of Finance and Bank of Japan (2019) “International Investment Position of Japan”,
retrieved on 1st May 2019 from https://www.mof.go.jp/international_policy/reference/iip/data.htm

Table 2 Illustrations of incentives offered by the Japanese government for foreign MNEs

Tax incentives for strengthening local business facilities	<ul style="list-style-type: none"> ● Employment promotion taxation ● Capital investment tax reduction ● Tax exemption or unequal taxation or local taxes
Incentives regarding special zones	<ul style="list-style-type: none"> ● National Strategic Special Zone ● Comprehensive Special Zones ● Special Zones for Reconstruction
Incentives based on Industrial Competitiveness Enhancement Act	<ul style="list-style-type: none"> ● System to remove the Gray Zone Areas ● System of Special Arrangements for Corporate Field Tests
Incentives based on the Act on Special Measures for Productivity Improvement	<ul style="list-style-type: none"> ● Regulatory Sandbox in Japan ● Connected Industries Tax system
Tax deduction system based on the Regional Future Investment Promotion Act	<ul style="list-style-type: none"> ● Special taxation measure regarding capital investment ● Tax exemption or unequal taxation of local taxes
Tax incentives for R&D (R&D Tax Credit System)	<ul style="list-style-type: none"> ● Tax deduction system for R&D ● Promotion of Open Innovation
Incentives for Highly Skilled Foreign Professionals from foreign countries; Incentive measures for foreign nationals concerning startups	<ul style="list-style-type: none"> ● Points-based preferential immigration treatment for highly skilled foreign professionals ● Resident status (so-called “start-up visa”) based on “Programs to Promote the Acceptance of Foreign Entrepreneurs” for National Strategic Special Zones ● Resident status (so-called “start-up visa”) based on “Projects for Encouraging Foreign Entrepreneurs to Start Business
Tax incentive for wage and productivity improvement	<ul style="list-style-type: none"> ● Tax deduction system for wage and productivity improvement (for large companies)

Source: Authors’ summary from “Investing in Japan: Incentive Programs”, retrieved on 1 May 2019 from https://www.jetro.go.jp/en/invest/incentive_programs/

Figure 2 - International comparison of average rates of return on inward FDI, 2008 - 2017



Source: Japan Ministry of Finance, data retrieved on 1 May 2019 from

https://www.mof.go.jp/international_policy/reference/iip/data.htm

Table 3 Most Attractive Factors when doing business in Japan

		1 st	2 nd	3 rd
1	Japanese market	59.4%	7.5%	7.5%
2	Existence of suitable partners (companies, universities, etc.) with outstanding technology or products	9.4%	18.8%	10.9%
3	Stability of country and society	6.0%	16.2%	22.6%
4	High quality of R&D	7.1%	14.3%	5.6%
5	Existence of renown global companies	9.0%	9.8%	9.0%
6	Infrastructure (traffic, logistics, ICT, energy, etc.)	1.5%	14.7%	11.3%
7	Potential for securing talented human resources	1.5%	5.3%	7.1%
8	Well-maintained living environment	1.5%	2.6%	8.6%
9	Japan's location (e.g. position as a gateway to Asia, advantage as a base for regional headquarters, etc.)	1.1%	4.5%	5.3%
10	Expected increase in demand and sales toward the 2020 Tokyo Olympics	1.1%	3.4%	7.5%
11	Well-structured legislation regarding intellectual property	0.8%	2.3%	1.9%

Source: JETRO (2018)

Note: The “Survey on Japan’s Investment Climate” was conducted from May to June 2018 by JETRO to collect data on the perception of the business environment in Japan among MNE subsidiaries. 266 companies responded to the questionnaire (out of approximately 1,700 companies which JETRO sent out).

Table 4 – OLS and Multinomial Logic Regression Results

	Model 1	Model 2-1	Model 2-2	Model 2-3
<i>Dependent Variables</i>	Breadth of competence	Sales & Marketing + Support Function	Sales & Marketing + Innovation	Sales & Marketing + Support Function + Innovation
	(OLS)	(Multinomial logit)		
Subsidiary Autonomy	0.552*** (0.176)	0.509* (0.299)	0.0198 (0.439)	1.118** (0.460)
<i>Internal Network & Integration</i>				
Internal Network Breadth	0.157 (0.192)	-0.195 (0.351)	-0.0110 (0.419)	0.409 (0.440)
Integration	0.655*** (0.177)	0.0997 (0.314)	0.984** (0.437)	0.379 (0.383)
Expatriate Ratio	0.794 (1.223)	0.956 (1.724)	-1.361 (2.000)	5.180*** (1.950)
Cross-functional Team	0.237* (0.127)	0.0112 (0.232)	-0.265 (0.302)	-0.374 (0.353)
<i>External Network & Integration</i>				
External Network Breadth	0.245 (0.184)	0.359 (0.318)	0.00535 (0.298)	0.988*** (0.381)
Psychic Proximity	-0.237 (0.234)	-0.200 (0.359)	-1.241** (0.491)	0.388 (0.539)
<i>Controls</i>				
Local Competition	0.0718 (0.218)	0.212 (0.346)	-0.353 (0.446)	0.424 (0.595)
Sales Volume (Log)	0.0563 (0.0830)	0.284* (0.145)	-0.134 (0.111)	0.288 (0.189)
Greenfield Investment	-0.103 (0.343)	-0.324 (0.539)	0.571 (0.670)	-0.710 (0.699)
Repeat	0.0998 (0.740)	0.390 (0.877)	-15.23*** (0.974)	-0.173 (1.520)
Year 2016	1.162*** (0.285)	18.43*** (0.456)	-1.687** (0.766)	18.76*** (0.896)
Constant	-2.085** (1.026)	-24.21*** (2.380)	-5.145*** (1.841)	-29.60*** (3.677)
Observations	193			193
R-squared	0.374			0.331

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 3 Breadth of Core Competences by Firms in the Sample, 2006 & 2016

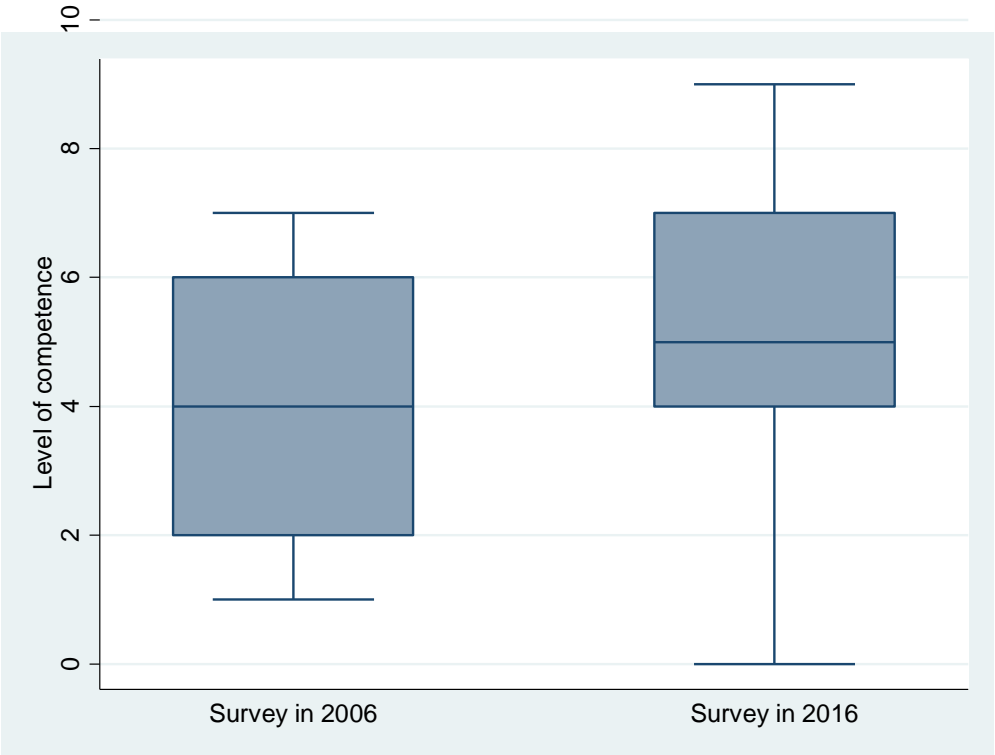


Table 5 Core Competences of Firms in the Sample

Type	Frequency	Percent (%)	Cumulative (%)
No competence	0	0	0
Sales & Marketing only	116	60.10	60.10
Sales & Marketing and Support Functions	42	21.76	81.87
Sales & Marketing and Innovation	20	10.36	92.23
Sales & Marketing, Support Functions and Innovation	15	7.77	100.00
Total	193	100.00	..