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ORIGINAL ARTICLE

Factory performance and decision-making authority between headquarters, expatriates, and local employees in Japanese MNCs in Southeast Asia

Kiyohiro Oki[1]

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Abstract This study aims to clarify the relationship between foreign factory performance and the decision-making authority for manufacturing activities between headquarters, expatriates, and local employees. To investigate these relationships, we conducted logistic regression analysis based on a questionnaire survey of 246 Japanese manufacturing subsidiaries in Southeast Asia and multiple case studies. We found (1) a negative relationship between factory performance and the level of the headquarters' authority, (2) a positive relationship between factory performance and the level of expatriates' authority, and that (3) subsidiaries' operating years and export ratio moderate the relationship between factory performance and expatriates' authority.

Keywords Factory performance · Decision-making authority allocation · Headquarter–subsidiary relationships · Expatriate management · Japanese MNCs

Introduction

Allocating decision-making authority is an important issue in organizational design research. Traditional research in this stream argues in favour of centralized decision-making authority among a few persons (Fayol 1916). However, because it is difficult for a centralized organization to adapt to a complex environment, some studies investigate the effectiveness of decentralized organizations with dispersed decision-making authority (Perrow 1967; Woodward 1965).

✉ Kiyohiro Oki
okik@e.u-tokyo.ac.jp

[1] Faculty of Economics, The University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo 113-0033, Japan

Further, decision-making authority allocation is an important topic in the international business (IB) literature (Young and Tavares 2004). Prior studies discuss whether decision-making authority should be centralized at headquarters or decentralized to foreign subsidiaries (Gammelgaard et al. 2012; Kawai and Strange 2014; Keupp et al. 2011; Newburry et al. 2003; Venaik et al. 2005). By focusing the decision-making authority on headquarters, it is possible to effectively utilize their knowledge and resources. However, to create new knowledge and innovation adapted to the local environment, the decision-making authority should be transferred to foreign subsidiaries.

On the other hand, some IB studies discuss whether multi-national corporations (MNCs) should give authority to expatriates or local employees in foreign subsidiaries by investigating whether the expatriates or local employees should occupy major positions at foreign subsidiaries (Ando 2014; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003). Since expatriates have knowledge not owned by local employees, they play important roles (e.g. top management positions) in the operation of the local subsidiary (Harzing 2001). However, expatriates are often inferior to local employees in their knowledge of local culture (Kopp 1994). Therefore, some studies suggested that it is desirable for subsidiaries to give authority to local employees (Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007).

The issue is especially important for Japanese MNCs because they tend to centralize decision-making authority in a headquarters or among Japanese expatriates (Bartlett and Ghoshal 1989). Although this ethnocentric management can achieve efficiency, it has disadvantages in terms of local adaptation. Therefore, some researchers criticize Japanese ethnocentric management practices and emphasize the importance of delegating decision-making authority to local employees (Bartlett and Yoshihara 1988; Kopp 1994; Lam 2003; Legewie 2002).

However, prior studies do not sufficiently discuss decision-making authority allocation in Japanese MNCs. They do not handle issues of authority allocation between headquarters and subsidiaries and between expatriates and local employees simultaneously. This is not peculiar to research on Japanese MNCs. Many prior studies that measure subsidiaries' authority quantitatively do not discuss authority allocation between expatriates and local employees directly (Gammelgaard et al. 2012; Kawai and Strange 2014; Keupp et al. 2011; Newburry et al. 2003; Venaik et al. 2005). On the other hand, prior studies on authority allocation between expatriates and local employees do not directly measure each decision-making authority and do not refer to the extent of the subsidiary's original authority (Ando 2014; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003). Therefore, the extents of headquarters', expatriates', and local employees' decision-making authority in Japanese MNCs are unclear, as well as how it relates to performance.

This research gap poses several problems. First, many existing studies have discussed decision-making authority allocation in MNCs from the viewpoint of the knowledge of headquarters, expatriates, and local employees (Bartlett and Ghoshal 1989; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003; Kawai and Strange 2014; Kopp 1994; Keupp et al. 2011). These studies consider knowledge the main source of competitive advantage for firms and that who should

have authority will change depending on which knowledge type (i.e. of headquarters, expatriates, local employees) is needed for the subsidiary. However, since the relationship between subsidiary performance and the decision-making authority of each entity has not been hitherto clarified, the relationship between the knowledge of headquarters, expatriates, local employees and subsidiary performance was not identified as well. To advance the discussion on the knowledge management in MNCs, we should thus investigate the relationship between subsidiary performance and the decision-making authority of each entity from the viewpoint of knowledge.

Second, although Japanese MNCs have been continuously encouraged to delegate decision-making authority to local employees, it is unknown whether it is desirable for local employees to have authority, as existing research has not yet identified the relationship between subsidiary performance and the decision-making authority of local employees. As such, we need clearer guidelines for the localization of Japanese MNCs.

Based on these research gaps, this paper aims to clarify the relationships between the performance of foreign factories and the decision-making authority regarding the manufacturing activities of headquarters, expatriates, and local employees by measuring their authorities in Japanese MNCs. From the viewpoint of the knowledge owned by each entity, we present several hypotheses concerning the relationship between factory performance and the decision-making authority of each entity. Based on a questionnaire survey of Japanese manufacturing subsidiaries in Southeast Asia, we clarify which entity tends to have authority in high or low performance factories. Moreover, we conduct case studies on Japanese manufacturing subsidiaries in Thailand to complement the quantitative analysis and investigate why the performance of a factory that a specific entity has authority on is good. Finally, to answer the special issue's question of 'what is new in Japanese business', we also discuss the current status of Japanese MNCs and the relevant historical changes.

This article is structured as follows. The next section discusses the theoretical background of authority allocation in MNCs and reveals the research gaps. The third section develops hypotheses about the relationship between factory performance and the authority of each entity in Japanese manufacturing subsidiaries. The fourth section describes the research design, data collection, and measurements. The fifth section reports the results of the empirical tests and case studies. In the sixth and the last section, we discuss the results and draw conclusions based on our findings.

Theoretical background

Authority allocation between headquarters and subsidiaries

The classical theory of foreign direct investment regards overseas subsidiaries as receivers of advantages from headquarters (Hymer 1976). From the knowledge-based view, which considers knowledge as the main source of competitive advantage (Kogut and Zander 1992), the knowledge accumulated by headquarters is an important source of competitive advantage for foreign subsidiaries (Fang et al. 2010; Gong 2003; Gupta and Govindarajan 2000). To exploit the knowledge of

headquarters in foreign subsidiaries, headquarters commonly reserve their authority of taking important decisions on subsidiaries' activities (Bartlett and Ghoshal 1989). By controlling foreign subsidiaries' activities, headquarters can align their activities with their corporate strategy, which simplifies knowledge transfer (Bartlett and Ghoshal 1989).

Meanwhile, since the 1980s, studies discuss the importance of decentralizing the decision-making authority to subsidiaries, named 'subsidiary autonomy', and clarifying the relationship between subsidiary autonomy and foreign subsidiary performance (Gammelgaard et al. 2012; Kawai and Strange 2014; Keupp et al. 2011; Newburry et al. 2003; Venaik et al. 2005). Since foreign subsidiaries accumulate knowledge on local environments, a high degree of subsidiary autonomy may stimulate market innovation (Venaik et al. 2005) and encourage adaptation to the local environment (Harzing 1999). Particularly, decentralization has become an important management issue for Japanese companies because they prioritize the transfer of resources from Japan (Bartlett and Ghoshal 1989; Kopp 1994). For example, Kopp (1994) suggests decision-making by headquarters may not be suitable for local context, because headquarters' decisions are mainly based on their own knowledge, even though they do not understand the local environment in detail.

However, the discussion of centralization and decentralization is not over. Kawai and Strange (2014) show that the relationship between autonomy and performance changes with conditions in foreign subsidiaries of Japanese MNCs, indicating that firms need an appropriate balance of centralization and decentralization depending on conditions.

Authority allocation between expatriates and local employees

Some research address authority allocation between expatriates (mainly parent country nationals) and local employees. These studies discuss authority allocation between expatriates and local employees by investigating whether expatriates or local employees should occupy major positions at foreign subsidiaries (Ando 2014; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003).

Edstrom and Galbraith (1977) propose expatriates are used for filling positions, developing managers, and developing organizations. First, expatriates are assigned to fill the positions requiring skills and knowledge that local employees do not have. Second, by sending managers abroad, they can gain overseas experience and develop their management capabilities. Third, expatriates are used to control the local organization and ensure coordination with headquarters corporate policies and philosophies. From the knowledge-based view, filling positions is noteworthy because it is related to knowledge transfer (Harzing 2001). Because some of the headquarters' knowledge includes tacit knowledge that is hard to transfer, firms need expatriates to promote knowledge transfer (Fang et al. 2010; Gupta and Govindarajan 2000). Therefore, in companies with a strong tendency to transfer knowledge from headquarters to subsidiaries (e.g. Japanese companies), expatriates tend to occupy important local positions (Bartlett and Ghoshal 1989).

However, there is a disadvantage to having expatriates occupy major positions in subsidiaries as it is possible that foreign subsidiaries cannot adapt to the local environment because the opinions of local employees, who accumulate more knowledge on the local environment than expatriates, are not reflected in decision-making (Kopp 1994; Lam 2003; Legewie 2002). Therefore, it can be desirable to give decision-making authority to local employees if a foreign subsidiary must adapt to the local environment.

Based on this background, some studies investigate whether expatriates or local employees should occupy major positions at foreign subsidiaries or whether a small proportion of expatriates facilitate subsidiary performance in Japanese MNCs (Ando 2014; Fang et al. 2010; Gaur et al. 2007; Gong 2003).

Authority allocation between headquarters, expatriates, and local employees

International management studies discuss whether headquarters or foreign subsidiaries should have authority and whether expatriates or local employees should have authority; however, few studies integrate discussions of both simultaneously in terms of headquarters', expatriates', and local employees' authority. Therefore, the literature lacks a sufficient discussion of who should have decision-making authority related to the operations of foreign subsidiaries.

In research focusing on the authority of foreign subsidiaries, it is not clear whether expatriates or local employees should have authority in the subsidiaries. While using proportion of expatriate in subsidiaries as a variable (Kawai and Strange 2014; Venaik et al. 2005), prior studies do not measure the authority of expatriates and local employees on a scale similar to the subsidiary autonomy. Therefore, they do not provide any specific suggestion as to who should have authority within subsidiaries.

On the other hand, research focusing on expatriates and local employees clarify whether expatriates or local employees should have authority using the subsidiary president's nationality, the number of expatriates, or expatriate ratio as variables (Ando 2014; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003). However, these studies do not directly measure which entity has the decision-making authority. Therefore, they seem to overlook the possibility of expatriates retaining authority even when local employees take major positions at subsidiaries. Furthermore, because these prior studies do not measure the headquarters' authority, they do not consider the possibility of a subsidiary retaining little authority, even if its president is a local employee. Negandhi and Baliga (1979) find that local employees in subsidiaries of the US MNCs were dissatisfied because they put local personnel in key positions, but do not give authority to foreign subsidiaries. Local employees do not necessarily have decision-making authority even if they have major positions in foreign subsidiaries.

This research gap becomes a big problem for Japanese companies. Although researchers often criticized the ethnocentric system of Japanese companies (Bartlett and Yoshihara 1988; Kopp 1994; Lam 2003; Legewie 2002), delegating decision-making authority to local employees has not progressed compared

to American and German companies (Pudelko and Tenzer 2013). Therefore, it is still an important management issue for Japanese companies. However, since it is unclear whether headquarters, expatriates, or local employees should have authority, it is unknown whether it is truly desirable for local employees to have authority. Kawai and Strange (2014) investigate Japanese MNCs in Europe and find that subsidiary autonomy has a greater impact on performance when the proportion of expatriates is high. Although this pioneering research integrates the discussion of subsidiary autonomy and that of expatriates, it does not directly measure the authority of expatriates and local employees. We should investigate the relationship between subsidiary performance and the decision-making authority between headquarters, expatriates, and local employees to advance the discussion of decision-making allocation in Japanese MNCs.

In other words, it is not clear whether the knowledge of headquarters, expatriates, or local employees is the one needed in the decision-making of the foreign subsidiaries of Japanese MNCs. While headquarters have the best knowledge of their operations and the group as a whole, local employees have the best knowledge of the local environment, while an expatriate would occupy a middle position between the two. By clarifying the relationship between the authority of each entity and performance, we can discuss which entities' knowledge is required in the decision-making of Japanese foreign subsidiaries.

Furthermore, among Japanese subsidiaries, we require discussions on such issues for foreign manufacturing subsidiaries because the discussion of authority regarding foreign manufacturing is still insufficient compared to that on sales/marketing and R&D. Foreign sales subsidiaries require local market adaptation, so it is desirable to gives them authority since local employees have a deep understanding of the local market (Kopp 1994; Tran et al. 2010). On the other hand, the autonomy of foreign R&D units should be restricted when it needs a connection with the parent company, and they should have authority when they are expected to demonstrate originality (Asakawa 2001). Some point out that it is effective to exploit local employees to acquire local knowledge from local innovation networks (Lam 2003).

However, in the case of foreign manufacturing subsidiaries (foreign factories), few studies examine whether decision-making authority should be given to local employees. Although some studies find that strong authority of the headquarters and expatriates lowers local employees' motivation in a Japanese foreign factories (Fucini and Fucini 1990), few clarify whether delegating authority to foreign manufacturing subsidiaries or local employees leads to better factory performance. Because manufacturing activities do not necessarily require local adaptation and absorb knowledge from local environment, granting authority to subsidiaries or local employees does not necessarily improve factory performance. Notably, many Japanese companies focus on transferring the production system, which is an advantage of Japanese companies (Abo 1994; Bartlett and Ghoshal 1989; Womack et al. 1990). Therefore, it is possible that strong control from headquarters improves factory performance because it can promote knowledge transfer of the production system. Similarly, delegating decision-making authority to expatriates may improve the factory performance because they can make the right decision to improve the factory

by utilizing their knowledge of the Japanese production system (Elsey and Fujiwara 2000; Brannenn et al. 1999).

Therefore, we investigate the relationship between factory performance and the decision-making authority on manufacturing activities between headquarters, expatriates, and local employees in Japanese manufacturing subsidiaries.

Hypotheses development

In developing the hypotheses, this paper focuses on the knowledge of each entity. As previously mentioned, the discussions on authority allocation in MNCs have focused on the knowledge of headquarters, expatriates, and local employees (Bartlett and Ghoshal 1989; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003; Kawai and Strange 2014; Kopp 1994; Keupp et al. 2011). Following these perspectives, we build hypotheses based on the nature of each entity's knowledge.

First, we build hypotheses about the authority of the headquarters. Many studies find a positive association between subsidiary autonomy and subsidiary performance (Gammelgaard et al. 2012; Kawai and Strange 2014; Keupp et al. 2011; Newburry et al. 2003; Tran et al. 2010; Venaik et al. 2005). A high degree of subsidiary autonomy encourages adaptation to the local environment (Harzing 1999). Since foreign subsidiaries are easy to accumulate knowledge about local environments, foreign subsidiaries can make right decision to adapt local environment (Kopp 1994). Even in manufacturing subsidiaries, it may be necessary to change the production system according to local environment (Abo 1994). Foreign manufacturing subsidiaries with decision-making authority are more likely to flexibly change the production system. Moreover, these subsidiaries can respond promptly to issues in manufacturing operations. Promptly resolving problems in production is important in factory performance (Liker 2004). For example, Toyota gave manufacturing operators line-stop authority to respond rapidly to problems in manufacturing (Womack et al. 1990). Because foreign subsidiaries with decision-making authority can save time by not having to communicate with the headquarters, problem solving will occur faster. Therefore, we propose the following hypothesis:

H1 In a Japanese manufacturing subsidiary, the level of the headquarters' decision-making authority on manufacturing activities is negatively associated with factory performance.

Second, we build hypotheses on the decision-making authority of expatriates. From the viewpoint of knowledge, there are advantages and disadvantages when expatriates have authority. First, numerous studies suggest that the heavy use of expatriates leads to low subsidiary performance (Colakoglu and Caligiuri 2008; Gaur et al. 2007; Kopp 1994; Legewie 2002; Lam 2003). For instance, Kopp (1994) proposes that the heavy use of expatriates leads to neglecting the knowledge of local employees, which causes problems for local adaptation. As previously mentioned, it may be necessary to change the production system according to the local

environment (Abo 1994). When building a production system suitable for the local culture, it may be desirable to give local employees authority on manufacturing because they understand local needs better than expatriates do. Therefore, we propose the following hypothesis:

H2a In a Japanese manufacturing subsidiary, the level of Japanese expatriates' decision-making authority on manufacturing activities is negatively associated with factory performance.

However, the opposite can hold based on the unique knowledge of expatriates. Gong (2003) considers that the knowledge of expatriates can improve subsidiary performance and suggests that the relationship between subsidiary performance and expatriate's authority can be positive. Japanese expatriates tend to have plenty of knowledge about Japanese production systems and how to improve their factories (Brannenn et al. 1999; Fucini and Fucini 1990). For example, Elsey and Fujiwara (2000) reveal that Japanese employees facilitate transfer of Kaizen activities to foreign factories in Toyota. Moreover, because parent company nationals are in a better position to understand the value of the knowledge generated at the subsidiary (Björkman et al. 2004), Japanese expatriates are able to find the best practices from other countries and introduce them. Furthermore, they can acquire global technology and market information from their social ties with other managers in the MNC (Gupta and Govindarajan 2000). By exploiting this knowledge, they may be able to make decisions that improve the factory.

Moreover, if the expatriates can make decisions locally, this process should accelerate problem solving in the factory and increase the speed of improving operations. Although headquarters understands its own situation and that of other countries better than expatriates do, the latter understand local affairs better than headquarters and can make decisions rapidly by considering local circumstances. Since headquarters does not understand local affairs well, it may not be able to make decisions at a time suitable for subsidiaries or may make decisions that are not suitable for them. As such, by giving authority to expatriates, it is possible to balance between exploiting the knowledge of the parent company and adapting to the local environment. Kawai and Strange (2014) find that subsidiary autonomy has a greater impact on performance when the proportion of expatriates is high, which implies the possibility that giving decision-making authority to Japanese expatriates improves subsidiary performance. Therefore, we propose the following hypothesis:

H2b In a Japanese manufacturing subsidiary, the level of Japanese expatriates' decision-making authority on manufacturing activities is positively associated with factory performance.

Third, we posit hypotheses regarding local employees' decision-making authority. Prior studies on expatriates and local employees suggest that giving authority to local employees is desirable in foreign subsidiaries (Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007: Kopp 1994). Specifically, delegating

decision-making authority to local employees encourages innovation that is adapted to the local environment because they have sufficient knowledge of the local environment (Kopp 1994). If local employees participate in decision-making, the company is able to adapt the Japanese production system to the local environment. Therefore, we propose the following hypothesis:

H3 In a Japanese manufacturing subsidiary, the level of local employees' decision-making authority on manufacturing activities is positively associated with factory performance.

However, specific situations can influence the relationship between decision-making authority and performance. Particularly, existing studies have discussed various situations where the need for expatriates diminishes (Ando 2014; Colakoglu and Caligiuri 2008; Fang et al. 2010; Gaur et al. 2007; Gong 2003). Given the role of expatriate's knowledge transfer, there are two cases when the expatriates can become unnecessary: one, when the local employees have accumulated the knowledge of expatriates and the other, when the knowledge of the expatriates is unnecessary for the subsidiary.

First, as foreign companies gain more experience, the knowledge transfer to local employees tends to increase. Gong (2003) finds that the number of operating years moderates the relationship between exploiting expatriates and subsidiary performance. By accumulating experience, local employees learn the company's know-how from the expatriate and the expatriate ultimately becomes unnecessary. Brannenn et al. (1999) refer to a foreign factory of a Japanese MNC, in which local employees take leading positions gradually by understanding the parent firm's production methods. Therefore, the relationship between expatriates' authority and factory performance should be moderated by the operating years. This leads to the following hypothesis:

H4 In a Japanese manufacturing subsidiary, the subsidiary's operating years negatively moderate the relationship between expatriates' decision-making authority on manufacturing activities and factory performance.

Second, the knowledge of expatriates becomes unnecessary when the knowledge on the local country becomes more important in the business of the foreign subsidiary than the knowledge on other countries. One such situation is when foreign subsidiaries mainly target domestic markets, that is, the foreign manufacturing subsidiary assumes the role of domestic production. Export factories tend to need information on customers and technologies from other countries to deal with foreign customers. Additionally, export factories need to coordinate with the headquarters because there is the possibility of adjustment of production with other bases. As such, it is not a local employee but expatriates who can easily accumulate knowledge of other countries, including the home country (Björkman et al. 2004; Gupta and Govindarajan 2000). Belderbos and Heijltjes (2005) indicate that Japanese expatriates tend to be presidents of Japanese foreign

manufacturing subsidiaries in Asia that mainly engage in exporting. Because it is necessary for exporting factories to understand global market trends and the situation of other plants, it can be desirable for expatriates who have accumulated such knowledge to have decision-making authority. In other words, the expatriates in foreign factories targeting domestic business will not require decision-making authority in these factories because there is a lower need for their knowledge. We can thus propose the following hypothesis regarding the export ratio as a moderator in the relationship between factory performance and expatriates' decision-making authority:

H5 In a Japanese manufacturing subsidiary, the subsidiary's export ratio positively moderates the relationship between expatriates' decision-making authority on manufacturing and factory performance.

Our conceptual framework is summarized in Fig. 1.

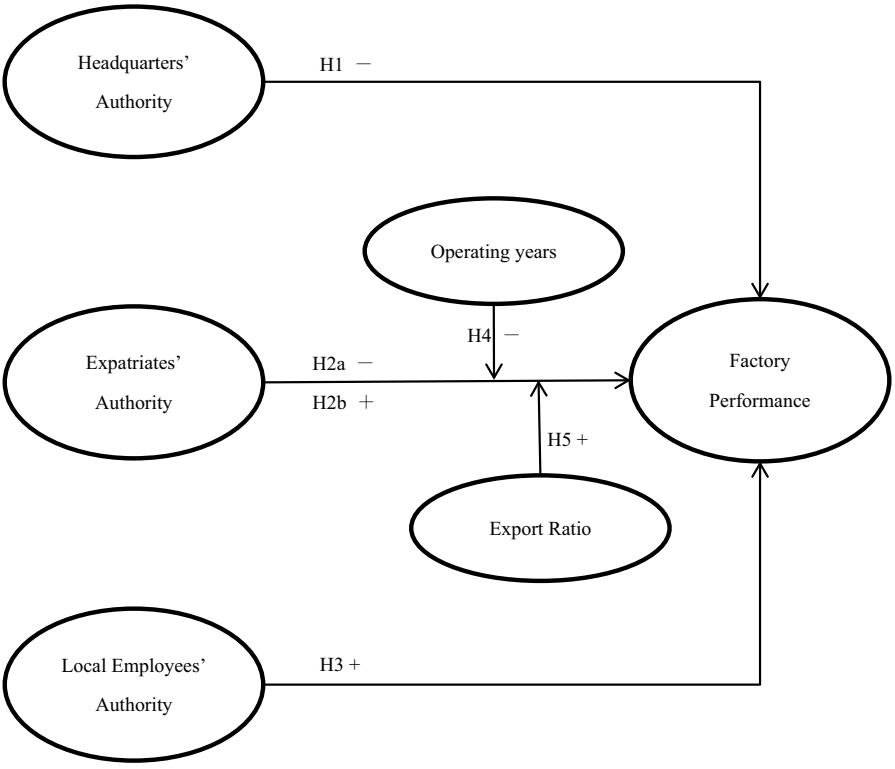

Fig.. 1 The conceptual framework

Research design

Sample and data

We employ data from a questionnaire survey of top managers working in manufacturing subsidiaries in Southeast Asia owned by Japanese multinationals. We focus on Southeast Asia for two reasons. First, Southeast Asia is strategically important for Japanese companies. The Ministry of Foreign Affairs of Japan reported the existence of 4354 subsidiaries of Japanese manufacturing companies in this region in 2016, which was more than that in China (3646) and the US (3166) for the same year. It is important to clarify the trends in key areas for Japanese companies to understand their actual situation. Second, Southeast Asia will yield a diverse sample; it includes countries where investment concentrated since the 1970s (e.g. Singapore, Thailand,) and countries where investment concentrated after the 2000s (e.g. Indonesia, Vietnam). Therefore, we can show a common tendency among diverse countries without being bound by the characteristics of any one country.

We collected data from the *Toyo Keizai Kaigai Shinshutsu Kigyo Soran* 2015 (Directory of Japanese Companies Abroad 2015) on Japanese manufacturing subsidiaries in Southeast Asia. We first selected all subsidiaries with manufacturing functions (2924 subsidiaries). These subsidiaries belong to the food, transportation equipment, chemical and pharmaceutical, metal product, pulp and paper, steel, ceramic product, rubber product, precision equipment, textile and garment industry, electronic machinery, agricultural forestry, general machinery, non-ferrous metal, construction, and other manufacturing industries. Second, we chose subsidiaries with presidents or senior managers whose names are disclosed in the directory. By specifying concrete respondents, we could direct our questionnaire to top managers. Third, we omitted foreign subsidiaries within 5 years of establishment due to their short history. Thus, the final sample contains 1713 subsidiaries.

We chose a top manager (e.g. president) of a foreign subsidiary as a respondent. Because respondents need to understand the overall status of their subsidiaries, the status of other subsidiaries, and technology environment, we consider top managers as suitable respondents. We asked respondents to answer questions about the status of one major business/factory of each subsidiary over the past year. We asked Japanese respondents to respond in Japanese and other respondents to answer in English. In creating a questionnaire in Japanese, we translated English scales into Japanese, then back to English, and then check its consistency. Before sending the questionnaire, we asked six researchers to check the questionnaire. We also pre-tested the questionnaire by consulting four business persons with managerial experience at overseas subsidiaries and one manager managing an overseas business at the headquarters and fine-tuned the wording.

After the pre-test, we distributed questionnaires to managers in September 2016 and sent one reminder. We received replies from 343 subsidiaries (a response rate of 20.0%). According to Harzing (1997), this response rate can be

considered acceptable. We conducted a *t* test between the responding and non-responding firms to confirm that there were no non-response biases. There are no significant differences in the mean number of employees (*t*-statistic = 0.415) and the number of operating years by country. There are also no significant differences in the mean number of employees and operating years between firms that responded before we sent the reminder and those that answered after the reminder (number of employees: *t*-statistic = − 0.121, operating years: *t*-statistic = 0.630). After excluding 97 subsidiaries due to their incomplete answers, we had 246 valid respondents (subsidiaries) from 200 parents firms (Table 1).

Measurement

We conducted a logistic regression analysis with the variables discussed below.

Dependent variables

The dependent variables are represented by factory performance relative to factories in other foreign countries (*factory performance*), which is subjectively provided by respondents. Whether the subjective or the objective scale should be used as performance is actively discussed in the IB field (Brouthers 2002; Nguyen and Rugman 2015; Nguyen 2011). We used the subjective scale for the following reasons. First, in IB, subjective measures are often used as reasonable indicators (Brouthers 2002; Gammelgaard et al. 2012; Geringer and Hebert 1991; Kawai and Strange 2014; Nguyen and Rugman 2015; Nguyen 2011; Venaik et al. 2005). Obtaining objective performance data for subsidiary operations is difficult because subsidiary performance is often not disclosed (Brouthers 2002; Geringer and Hebert 1991). Therefore, using the subjective scale in this research does not deviate from the methodologies employed by relevant existing studies.

Second, in operations research, several studies used subjective scales to measure operational (factory) performance (Ketokivi and Schroeder 2004; Swink et al.

Table 1 Number of firms by country

	Target	Response	Effective response
Brunei	1	1	1
Cambodia	5	0	0
Indonesia	336	62	47
Lao	3	1	1
Malaysia	237	70	52
Myanmar	1	0	0
Philippines	139	30	20
Singapore	91	20	17
Thailand	651	136	92
Vietnam	249	23	16
Total	1713	343	246

2007; Tenhiälä and Helkiö 2015). For instance, Ketokivi and Schroeder (2004) find that the perceptual measures of operational performance satisfy the requirements of reliability and validity. From the viewpoint of measuring factory performance, it is considered that the subjective scale is relevant.

Moreover, we measure factory performance compared to factories in other foreign countries by following existing studies (Ambos and Birkinshaw 2010). The headquarters of MNCs often decide internal resource allocation by comparing the performance of foreign subsidiaries (Birkinshaw and Hood 1998). For example, Nissan motors evaluate each factory's performance by comparing it with other factories and decide which factory will produce a new car model based on the evaluation (Oki 2015). One goal of foreign manufacturing subsidiaries is often to exceed the performance of subsidiaries in other foreign countries to attract attention from headquarters. Moreover, since factory performance is not disclosed, it is difficult to compare factory performance with that of other companies. Therefore, we consider it appropriate to use internal comparisons as a performance measure.

We measured factory performance using four question items based on IB research (Birkinshaw et al. 2005) and operations research (Hayes and Wheelwright 1984; Swink et al. 2007). The question items were (1) cost (productivity), (2) quality (production quality), (3) delivery (lead-time), and (4) flexibility (process flexibility). We asked respondents to assess the level of a factory's performance on a scale from 1 (much worse than other foreign factories) to 5 (much better than other foreign factories), and we averaged the scores into a composite measure (Cronbach's $\alpha = 0.820$).

We verified the normality of the dependent variables by conducting a Shapirio–Wilk test. From the results, we can conclude that the variable is not normally distributed. Therefore, we converted the dependent variables into dummy variables coded '1' for subsidiaries with factory performance above 3 (superior to other factories) and conducted a logistic regression analysis with this dummy variable as the dependent variable.

Furthermore, we checked the validity of this dependent variable by comparing the variable to other objective performance measurements. For example, factory performance is known to correlate with market performance (Swink et al. 2007). We collected 'sales volume of each subsidiary in 2016 (A)' from *Toyo Keizai Kaigai Shinshutsu Kigyo Soran* 2018. We also collected sales volumes of other foreign subsidiaries of the same parent company that produced the same type of products, and averaged those sales volumes (B). We calculated 'relative sales' by dividing A by B. The factory performance calculated in this study is positively associated with the log of relative sales in zero-order correlations ($r = 0.329$, $p < 0.01$, $n = 80$). Therefore, it can be considered that the dependent variable is a valid variable related to objective performance.

Independent variables

The independent variables were the decision-making authority on manufacturing at headquarters (*headquarters' authority*), Japanese expatriates (*expatriates' authority*), and local employees (*local employees' authority*). We measured the decision-making authority on manufacturing using five manufacturing decision items

following Gate and Egelhoff (1986, p. 74). The items were: (1) subcontracting out large portions of the manufacturing instead of expanding the subsidiary's own facilities, (2) approval of quarterly production schedules and plans, (3) switching to a new manufacturing process or employing different methods and equipment when expanding new plant capacity, (4) decisions regarding routine purchasing activities, and (5) decisions regarding quality control.

We measured each authority by the following procedure. First, following prior research (Gammelgaard et al. 2012; Gupta and Govindarajan 2000; Shuler-Zhou and Schuller 2013; Venaik et al. 2005), we asked respondents to assess the level of the subsidiary's authority in each decision on a scale from 1 (exclusively decided by headquarters) to 5 (exclusively decided by the subsidiary) (Q1). Second, if the overseas subsidiary is involved in decision-making (the answer of Q1 is not 1), respondents were asked to assess the level of local employees' authority in each decision on a scale from 1 (exclusively decided by Japanese expatriates) to 5 (exclusively decided by local employees) to indicate the extent that overseas subsidiaries are involved in decision-making (Q2).

From these two questions, we calculated each authority. This research sets the maximum value of decision-making authority to 1 and distributes it to the three entities. For example, in a certain item, when 1 is chosen with Q1, the headquarters has all decision authority, and its authority is 1. Similarly, we replaced 2 with 0.75, 3 with 0.5, 4 with 0.25, and 5 with 0. We then performed the same numerical conversion for Q2. In this case, we distributed the subsidiaries' authority calculated in Q1 (1 − headquarters' authority) between expatriates and local employees. For example, if the answer to Q1 is 3 and the answer to Q2 is 2, the headquarters' authority is 0.5, the expatriates' authority is $(1-0.5)\times 0.75=0.375$, and the local employees' authority is $(1-0.5)\times 0.25=0.125$. After these calculations, we averaged each of the five items. The Cronbach's alphas were 0.726 (headquarters), 0.814 (expatriates), and 0.810 (local employees).

Control variables

As control variables, we used the following: *country dummy*, *industry dummy*, *product development dummy*, *sales dummy*, *operating years*, *subsidiary size*, *the proportion of Japanese expatriates*, *stock holding ratio of parent companies*, *acquired subsidiary dummy*, *export ratio, parent size*, *the number of subsidiaries, competitive intensity*, and *technology turbulence*. First, we controlled for country and industry effects using country and industry dummy variables (Gammelgaard et al. 2012). Second, because prior research controls for subsidiary function (Chang et al. 2012), we used a product development dummy and sales dummy to control the effect of the functions foreign subsidiaries have besides manufacturing. We coded each dummy '1' for subsidiaries with product development/sales functions. Prior studies also control for operating years, subsidiary size, and the proportion of Japanese expatriates to subsidiary employees in analysing subsidiary performance (Chang et al. 2012; Gammelgaard et al. 2012; Kawai and Strange 2014). We measured operating years in years since establishment. We measured subsidiary size as the log of the total number of employees. The proportion of Japanese expatriates is the ratio of

the number of Japanese expatriates to that of total employees in the subsidiaries. Because some studies suggest that the stock holding ratio of parent companies is related to subsidiary performance (Tang and Rowe 2012), we added the stock holding ratio of parent companies (%). To control for the effect of entry mode, we created an acquired subsidiary dummy coded '1' for acquired subsidiaries. We measured export ratio, which is a determinant of subsidiary autonomy (Taggart and Hood 1999), by the percentage of total sales exported. We also used operating years and export ratios as moderator variables.

Furthermore, we control for the parent company's factors. First, to control for the resources of the parent company, we added parent size, which is measured as the log of the total number of employees of the parent company (Fang et al. 2010). Second, to control for the international production strategy (concentrating or dispersing) of the parent company, we added the number of subsidiaries, measured as the log of the total number of foreign manufacturing subsidiaries of the parent company (Delios and Bjorkman 2000).

Finally, we control for competitive intensity and technology turbulence because the external environment can influence subsidiary performance. We measured competitive intensity using six criteria and technology turbulence using five criteria developed by Jaworski and Kohli (1993). We asked respondents to rate their level of agreement with the five descriptions on a scale from 1 (fully disagree) to 5 (fully agree). By selecting items to obtain the highest reliability, we averaged four items in both cases (competitive intensity $\alpha = 0.714$; technology turbulence $\alpha = 0.757$).

Common method bias

Common method bias is possible in our study because some variables are based on subjective measures and a single respondent per subsidiary. Therefore, we adopted both ex-ante and ex-post approaches to deal with common method bias (Chang et al. 2010).

In the ex-ante approaches, we guaranteed the anonymity and confidentiality of the study in the cover letter to each respondent to reduce social desirability bias. Moreover, we first asked respondents about authority, and then asked about factory performance 40 questions later. Therefore, it was difficult for respondents to recall the relationship between them. Furthermore, we carefully designed our questionnaire items to ensure that it does not include ambiguous, vague, and unfamiliar terms by conducting pre-tests.

In the ex-post approaches, we created analysis models with interaction variables to ensure that respondents are not aware of the specific hypothesized relationships. In addition, we applied ex-post statistical approaches. First, we carried out the marker variable technique (Lindell and Whitney 2001). We used the level of internal competition among subsidiaries (Luo et al. 2006) as a theoretically unrelated marker variable. We find no significant partial correlations between the constructs that lose significance after the adjustment. In addition, we checked for common method bias by Harman's single-factor test (Podsakoff and Organ 1986). We included all items from the four constructs (factory performance, each authority, competitive intensity,

and technology turbulence) in a factor analysis. The first factor accounted for only 16.4% (headquarters), 16.8% (expatriates), and 16.5% (local employees) of variance, below the generally accepted threshold of 50%. Accordingly, the extent of common method variance in this study is significantly limited.

Results

Logistic regression results

Table 2 presents a summary of the descriptive statics and correlations for all variables. We conducted logistic regression analysis to test the hypothesis using SPSS 23. The variance inflation factors did not exceed the value of 3 in all models, and were well below the threshold value of 10 (Hair et al. 1998).

Table 3 summarizes the results of the regression analysis. Model 1 presents the base model with control variables only. Models 2, 3, and 4 add headquarters' authority, expatriates' authority, and local employees' authority to Model 1, respectively. Model 5 adds expatriates' authority to Model 4.

The results of Model 2 support H1, suggesting that Japanese foreign factories with good performance tend to have authority. Based on the results of Model 3, we reject H2a and accept H2b. This shows that Japanese foreign factories in which Japanese expatriates have authority tend to perform well. Moreover, the results of Model 4 and Model 5 reject H3. There are no association between factory performance and local employees' authority.

Model 6 adds operating years as a moderator to Model 3, and shows that as the subsidiaries' operating years increase, the positive relationship between the expatriates' authority and factory performance weakens. Therefore, H4 is supported. Similarly, Model 7 adds the export ratio as a moderator to Model 3. This model reveals that the export ratio moderates only the positive association between expatriates' authority and factory performance. Accordingly, we accept H5.

We also plotted graphs to illustrate the moderating effects of operating years (Fig. 2) and export ratio (Fig. 3) on the expatriates' authority–factory performance relationship. We calculated the probability of being a good foreign factory (factory performance above 3) by calculating the regression equation by setting other values to the average score. In the case of a young subsidiary or a subsidiary with a high export ratio, the more the decision-making authority that expatriates have, the higher the probability of being a good foreign factory is.

Further analysis

When employing cross-sectional data, the possibility of reverse causation is often a concern. Since the purpose of this study is to clarify the relationship between decision-making authority and performance, which has not been clarified so far, our research was not necessarily aimed at statistically identifying the causal relationship between them. However, since the hypotheses were built on the premise that

Table 2 Descriptive statics and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Operating years	23.83	10.36													
2. Subsidiary size	2.60	0.56	0.31**												
3. The proportion of Japanese expatriates	0.02	0.02	−0.23**	−0.59**											
4. Stock holding ratio of parent companies	86.66	20.71	−0.02	−0.02	0.02										
5. Acquired subsidiary dummy	0.10	0.30	0.10	0.10	−0.12	0.08									
6. Export ratio	50.2	36.25	0.06	0.19**	−0.15*	0.23**	−0.04								
7. Parent size (log)	3.13	0.72	0.22**	0.43**	−0.10	−0.02	0.07	0.03							
8. The number of subsidiaries (log)	0.95	0.46	0.23**	0.32**	−0.12	−0.08	0.00	−0.05	0.73***						
9. Competitive intensity	3.57	0.72	0.07	0.14*	−0.05	0.00	0.03	0.11	0.14*	0.13*					
10. Technology turbulence	3.22	0.72	−0.03	0.14*	−0.02	0.25**	−0.11	0.19**	0.10	0.03	0.33**				
11. Headquarters' authority	0.31	0.18	−0.07	0.19**	0.00	0.17**	0.01	0.25**	0.18**	0.06	0.05	0.23**			
12. Expatriates' authority	0.41	0.19	−0.10	−0.19**	0.12	0.01	−0.06	−0.17**	−0.18**	−0.18**	0.01	−0.11	−0.53***		
13. Local employees' authority	0.28	0.18	0.18**	0.00	−0.13*	−0.19**	0.05	−0.07	0.01	0.13*	−0.06	−0.12	−0.46***	−0.51***	
14. Factory performance (dummy)	0.57	0.50	−0.08	−0.02	−0.04	−0.11	−0.10	0.00	−0.06	−0.15*	−0.02	0.00	−0.18**	0.14*	0.04

*$p < 0.5$; **$p < 0.01$; ***$p < 0.001$

Table 3 Results of logistic regression analysis

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Est.	SD	Est.	SD	Est.	SD	Est.	SD	Est.	SD
Operating years (OY)	−0.067	0.171	−0.080	0.172	−0.070	0.171	−0.068	0.171	−0.079	0.172
Subsidiary size	−0.215	0.415	−0.166	0.422	−0.148	0.419	−0.223	0.416	−0.147	0.423
The proportion of Japanese expatriates	−16.602	10.089	−13.274	9.947	−16.773	9.945	−16.057	10.167	−13.919	9.981
Stock holding ratio of parent companies	−0.014	0.008†	−0.012	0.008	−0.015	0.008	−0.013	0.008	−0.013	0.008
Acquired subsidiary dummy	−0.574	0.505	−0.531	0.510	−0.517	0.511	−0.580	0.505	−0.514	0.511
Export ratio (ER)	0.113	0.184	0.195	0.191	0.180	0.190	0.111	0.184	0.207	0.192
Parent size (log)	0.289	0.344*	0.363	0.351*	0.304	0.345†	0.297	0.346*	0.357	0.350*
The number of subsidiaries (log)	−1.081	0.523	−1.124	0.536	−1.003	0.524	−1.105	0.529	−1.083	0.536
Competitive intensity	0.074	0.218	0.029	0.222	0.052	0.220	0.073	0.218	0.027	0.222
Technology turbulence	−0.033	0.234	0.064	0.241	−0.003	0.237	−0.026	0.235	0.061	0.241
Headquarters' authority			−2.434	0.942*						
Expatriates' authority (EA)					0.326	0.163*			0.512	0.195**
Local employees' authority							0.378	0.932	1.999	1.124†
Constant	2.878	1.675†	3.127	1.726†	2.614	1.700	2.759	1.702	0.665	1.907
Nagelkerke R^2	0.205		0.236		0.223		0.205		0.238	
Model χ^2	40.67†		47.57*		44.81*		40.84†		48.05*	

	Model 6		Model 7	
	Est.	SD	Est.	SD
Operating years (OY)	−0.163	0.180	−0.102	0.174
Subsidiary size	−0.248	0.428	−0.205	0.420
The proportion of Japanese expatriates	−21.476	10.453*	−18.413	10.284†
Stock holding ratio of parent companies	−0.017	0.008†	−0.015	0.008†

Table 3 (continued)

	Model 6		Model 7	
	Est.	SD	Est.	SD
Acquired subsidiary dummy	−0.640	0.519	−0.601	0.515
Export ratio (ER)	0.207	0.191	0.343	0.350
Parent size (log)	0.342	0.360	−0.964	0.531
The number of subsidiaries (log)	−1.119	0.539*	0.243	0.195†
Competitive intensity	0.037	0.222	0.028	0.221
Technology turbulence	−0.008	0.238	0.017	0.238
Expatriates' authority (EA)	0.381	0.168*	0.349	0.169*
EA × OY	−0.426	0.175*		
EA × ER			0.352	0.173*
Constant	3.082	1.740†	3.254	1.514*
Nagelkerke R^2	0.252		0.243	
Model χ^2	51.10*		49.15*	

Country dummies, industry dummies, product development dummy, and sales dummy were included in the models but are not reported

OY, ER, EA are *z*-standardized variables for creating interaction variables (Dawson 2014)

†$p < 0.1$; *$p < 0.05$; **$p < 0.01$

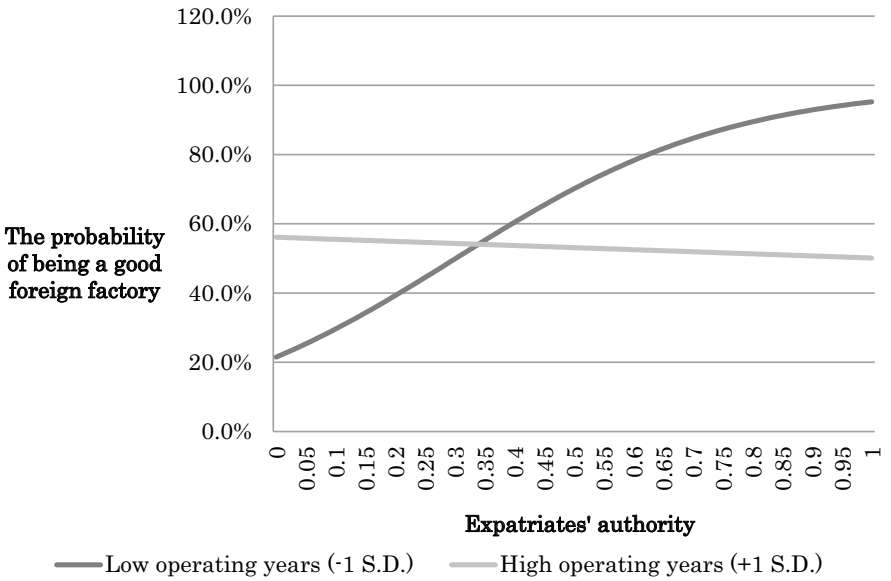

Fig. 2 Link between expatriates' authority and factory performance given the operating years

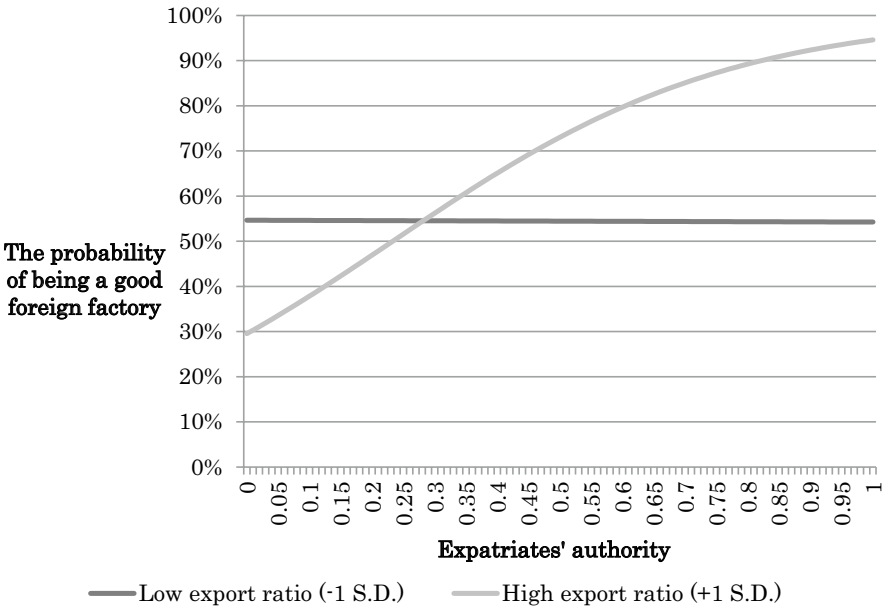

Fig. 3 Link between expatriates' authority and factory performance given the export ratio

decision-making authority influences factory performance, we need to consider the reverse effect, that is, factory performance influences decision-making authority. By following Landis and Dunlap (2000), we assessed the direction of causality between

decision-making authority and performance. We set factory performance as an independent variable and expatriates' authority as a dependent variable and tested the interaction between factory performance and operating years/export ratio using OLS regression.

First, the interaction between factory performance and operating years is not significant. Therefore, the possibility of reverse causality is of minimal concern in Model 6. On the other hand, the interaction between factory performance and the export rate is significant, while the export ratio is significant and factory performance is not significant. Therefore, it is suggested that both relationships may be established so that giving authority to expatriates improves factory performance in the case of an export factory, while expatriates tend to be given authority in export factories with good performance.

Additional qualitative analysis

By conducting quantitative analysis, we find a positive relationship between factory performance and expatriates' authority and its moderators. This positive association is an unexpected result compared to existing studies that has have suggested the importance of localization in Japanese companies (Bartlett and Yoshihara 1988; Kopp 1994; Fang et al. 2010; Gaur et al. 2007; Legewie 2002; Lam 2003). To explain these conflicting results, we investigate the reasons of these relationships. Additional qualitative research after the quantitative research (an explanatory sequential mixed method approach) is often used to explain why the quantitative results occurred (Creswell and Clark 2018). Because qualitative data are useful to explain why emergent relationships hold (Eisenhardt 1989), we conducted additional qualitative analysis to supplement the quantitative analysis. We investigate why expatriates' authority has a positive relationship with factory performance and why operating years and export ratio moderate the relationship between them.

To clarify the influence of expatriates' authority, it is desirable to select subsidiaries where the expatriates have the strongest authority as case studies. By clarifying how expatriates are involved in the factory performance of these companies, we can clarify the influence of expatriates' authority on performance. On the other hand, to investigate the effects of the moderator, it is required to investigate subsidiaries where the expatriate does not have strong authority and that have a large number of operating years or a low export ratio. Because we obtained results contradictory to those of existing studies that recommend localization, it is necessary to discuss the situations when localization is recommended in more detail. Therefore, we choose the cases of subsidiaries with a large number of operating years or a low export ratio, where local employees have the strongest authority, to clarify why these subsidiaries do not depend on expatriates.

We chose the sample as follows. First, we selected subsidiaries in Thailand because it had the highest frequency in the sample. Second, we chose 21 subsidiaries in Thailand because they allowed for additional contacts. Eight of these 21 companies were subsidiaries where expatriates had the strongest authority. On the other hand, there were three subsidiaries where local employees had the strongest

authority. All were subsidiaries whose operating years were above average or the export ratio was below average. We approached these 11 subsidiaries and were able to interview five subsidiaries. Table 4 summarizes the information on these subsidiaries. S1, S2, and S3 are the subsidiaries where expatriates have the strongest authority and S4 and S5 the subsidiaries where local employees have the strongest authority. The parent companies of these subsidiaries are different. In the semi-structured interviews with the top managers of the subsidiaries (60–180 min), we asked about (Q1) knowledge abundantly held by expatriates rather than local employees, (Q2) knowledge abundantly held by expatriates rather than headquarters (only to S1, S2, and S3), and (Q3) the effect of expatriates' decision-making in manufacturing activities on factory performance. The interview data are organized electronically and the responses to Q1–3 compiled for each company (Table 5). Since we are able to draw conclusions from the answers of these five subsidiaries, we did not increase the number of case studies further.

In the following, we clarify the relationship between expatriates' authority and factory performance by analysing S1–3 and the moderating effect of operating years and export ratio by analysing S4 and S5.

Subsidiaries 1–3: expatriates' authority and factory performance

The common point of S1–3 is that the expatriates play an important role in improving factory performance. For instance, the expatriates' knowledge at S1 was necessary for stable operations. Although this firm requires tacit knowledge to produce their products, they have not yet transferred the knowledge to local employees completely. Moreover, the expatriates had ideas that would improve factory performance. For example, the Japanese subsidiary's president led the company to introduce an IT system that allows the sales department to understand the production plan quickly. With this system, factory performance improved again because the sales side no longer made unreasonable demands, which often interfered with stable production. From the experience gained in factories in Japan and overseas, he considered these improvements were necessary to improve performance.

It was still difficult for local employees to take over the roles of the expatriates at S1. Expatriates' manufacturing know-how could not be transferred easily to local employees because it was difficult to codify. Moreover, some of the ideas to improve performance were still unique to expatriates, who have experience in Japan and overseas. Conversely, the local employees at S1 were focusing on their operations, so they did not have sufficient knowledge of other countries.

Additionally, some improvements at S1 were difficult to be proposed by headquarters. For example, the IT system was not yet introduced in Japan at that time. Expatriates thought that they could easily introduce the IT system at S1 because firm size was smaller than that in Japan and took the initiative of introducing it. Understanding the local context, the expatriates were thus able to start a new initiative without being bound by the existing practices in Japan.

The expatriates at S2 also lead the improvements in local performance. For example, when the expatriates discuss improvements in productivity with the local employees, they must specify exactly where to improve based on the data

Table 4 Summary of 5 subsidiaries

	S1	S2	S3	S4	S5
Operating years	20	29	6	42	21
Subsidiary size	86	470	820	1764	1500
Proportion of Japanese expatriates	6.98%	1.70%	11.0%	0.68%	0.67%
Stock holding ratio of parent companies	89%	100%	100%	52%	70%
Export ratio	50%	5%	65%	12%	10%
Headquarters' authority	0.2	0.25	0.25	0.15	0.4
Expatriates' authority	0.46	0.56	0.58	0.29	0.2
Local employees' authority	0.34	0.19	0.18	0.56	0.4
Factory performance	3.5	2.75	1.75	3.5	3.5
Industry	Chemical	Chemical	Non-ferrous metal	Electronic machinery	Transportation equipment
Time of research	2018/3/20	2018/3/22	2018/4/17	2018/3/19	2018/3/23

Table 5 Summary of interviews

Question	Subsidiary				
	S1	S2	S3	S4	S5
Q1: Knowledge abundantly held by expatriates rather than local employees	Production know-how for stable production Know-how for improving factory operation	Know-how for improving factory operations Situation of other factories	Production know-how for stable production Foreign customers' needs	Foreign customers' needs	Technology of parent company Foreign customers' needs
Q2: Knowledge abundantly held by expatriates rather than headquarters	Local context	Local context	Local context	NA	NA
Q3: The effect of expatriates' decision-making on manufacturing activities	Stable production Performance improvement	Performance improvement	Stable production Performance improvement to satisfy customers' needs	No strong relationship with performance	No strong relationship with performance

as local employees still lack the improvement know-how that Japanese expatriates have. Therefore, unless the Japanese are involved in the decision-making for production, improvement in the factory performance will likely be slow.

Additionally, local employees did not fully understand the situation of other factories in other countries because local employees did not have the means of communicating with other countries compared to expatriates. Since the expatriates at S2 were grasping the situation of the factories in other countries, they were better able to find the weakness of the Thai factory by comparing it with other factories. It was difficult for local employees to clarify and improve the problems of their own factories by comparing them with other factories.

Although headquarters held relatively more customer information compared to the expatriates at S2, they did not accumulate knowledge on the local context as expatriates did. Because there were few candidates for expatriates in Japan, they had continuously used specific individuals as expatriates. As a result, the knowledge on overseas production concentrated on such expatriates. Therefore, they left overseas production to the expatriates.

S3 was relatively recently established. Since local employees were lacking experience, Japanese expatriates with production experience in Japan had to take the initiative to transfer the production system from the Japanese factory. Especially for export products, since the customers requested the same quality as for the products made in Japan, the expatriates had to manage the operation in detail. Since the expatriates, not headquarters, had authority, they could make decisions according to the local context. Because various changes occurred during the initial period at the factory, it was desirable for the expatriates to have authority to respond to change. Although factory performance was not high due to a lack of experience, the factory's catching up speed was faster than for other factories in the parent company of S5.

From these cases, we find that expatriates contribute to the improvement of factory performance significantly. Expatriates' authority has a positive relationship with factory performance because expatriates have extensive knowledge on production know-how for stable production, know-how for improving factory operation, or information on factories and customers in other countries, which knowledge is still needed to improve factory performance in Japanese MNCs. It takes time for local employees to gain the same type of knowledge because they need long factory experience and also experience working with organizations in different countries, which the expatriates already have. However, in some cases (S1, S2), it is difficult for local employees to have knowledge equivalent to expatriate even after some time, suggesting that it is not easy to train local employees. Moreover, the expatriates also have knowledge which the headquarters do not have. Since the expatriates understand local context rather than the headquarters, they can provide necessary management on the subsidiary based on their knowledge at the necessary timing. Therefore, it is suggested that participation of the expatriates in decision-making may improve the factory performance.

Subsidiaries 4–5: effects of moderators

The common point of S4 and S5 was that the knowledge of expatriates was not necessarily important for the operation of the factory. S4 has been in operation for more than 40 years and has given authority to local employees since its foundation. Regarding improvement, local employees accumulated the knowledge for improvement themselves after learning the basic information from Japan. Local employees gained the ability to manage factory operations to the same extent as Japanese expatriates because they had the opportunity to learn during their long operating experience.

Furthermore, another reason why expatriates were unnecessary in S4 is that their main business targets the domestic market, meaning it was unnecessary for the subsidiary to understand foreign markets and for the expatriates to have decision-making authority. Local employees in S4 were also not proactive in interacting with other subsidiaries. However, the president of S4 believed that delegating authority to local employees was not a problem, as long as the domestic business was the focus of the subsidiary.

A similar tendency was seen in S5. Although S5 has not been operating for a long period, the local employees in S5 accumulated abundant manufacturing expertise. Over 10 years ago, S5 gave local employees the authority to make decisions on manufacturing and had local employees accumulate production experience. Therefore, there were few local production stages in which Japanese expatriates need to be involved.

Moreover, S5 targeted mainly the domestic market. Because the needs of local customers are different from those of customers in Japan, there was little need to transfer advanced manufacturing technologies from Japan. Moreover, since coordination with overseas customers was also unnecessary, there was little need to operate a factory based on the requirements of customers in other countries. The business of S5 did not need expatriates' technical and market knowledge on other countries.

From these cases, we can confirm that expatriates do not necessarily have authority in an old subsidiary or one with a low export ratio because the importance of the expatriates' knowledge decreases in such cases. If local employees gain the same knowledge of factory management as that of expatriates from experience, the merit of having expatriates participating in decision-making is reduced. Moreover, for subsidiaries targeting the domestic market, the importance of information on the customers and technologies of other countries diminishes, so the advantage of having the expatriates having decision-making authority is also reduced. It is thus suggested that the relationship between expatriates' authority and performance changes according to whether the knowledge of the expatriates is unique to them and valuable to foreign subsidiaries.

Discussion and conclusion

This study shows a negative relationship between performance and headquarters' authority in overseas manufacturing activities. This is consistent with the results of extant studies on the relationship between subsidiary autonomy and performance

(Gammelgaard et al. 2012; Keupp et al. 2011; Newburry et al. 2003; Venaik et al. 2005). Even in manufacturing activities that have been regarded as advantages for Japanese companies, there are positive correlations between subsidiary autonomy and performance. Therefore, it is suggested that Japanese companies may need to delegate authority to overseas subsidiaries, even for activities where Japanese companies have strengths. Although we cannot identify the causal relationship between them, clarifying a negative association between performance and headquarters' authority in overseas manufacturing activities is a meaningful finding in understanding the situation of the foreign manufacturing subsidiaries of Japanese MNCs.

Moreover, we find a positive relationship between factory performance and expatriates' authority, but no significant correlation between factory performance and local employees' authority. This is a surprising result for the Japanese companies that have been required to delegate authority to local employees (Bartlett and Yoshihara 1988; Kopp 1994; Lam 2003; Legewie 2002). It is thus possible that current Japanese MNCs may not be required to delegate authority to local employees in all activities.

To explain these results, we investigate why expatriates' authority has a positive relationship with factory performance by conducting case studies. As a result, we show that the knowledge of expatriates contributes to improving factory performance in the subsidiaries where the expatriates have decision-making authority. These findings suggest Japanese expatriates still have the advantage of having knowledge on manufacturing, other subsidiaries, and foreign customers over local employees. Although headquarters also have such knowledge, they do not have sufficient knowledge about the local context. Therefore, it is difficult for headquarters to make decisions considering local context. It is thus suggested that delegating decision-making authority to expatriates, who have both knowledge accumulated in the headquarters and in the subsidiary, may enhance the performance of overseas manufacturing activities of Japanese companies.

However, such relationships are not always identified. Specifically, we determine that subsidiaries' long operating years or low export ratio weakens the relationship between factory performance and expatriates' authority. By conducting case studies, we also clarify that the importance of expatriate's knowledge decreases if local employees acquire the same knowledge or if the knowledge unique to the expatriates is no longer necessary for the local operation. This result is consistent with those of existing studies (Belderbos and Heijltjes 2005; Gong 2003; Fang et al. 2010). This paper shows that the discussion of existing studies can be applied to the overseas manufacturing activities of Japanese companies. It may thus be desirable to refer to the knowledge of expatriates when deciding whether to delegate authority over manufacturing activities from expatriates to local employees.

What is new in Japanese business?

Finally, we answer the special issue's question of 'what is new in Japanese business'. This paper identifies both the changes and lack of changes in the authority allocation of Japanese MNCs. First, we find Japanese MNCs still have an ethnocentric

management system that depends on expatriates, which has not changed significantly since the 1980s. However, this article suggests the possibility that benefits may stem from this unaltered management. The know-how of domestic and overseas manufacturing activities and the information on the customers and the technologies in other countries, which is accumulated mainly by Japanese expatriates, can still be needed in foreign factories. In other words, the knowledge possessed by Japanese expatriates may still be the source of the advantage of foreign manufacturing subsidiaries. We should thus pay attention to the merits of the unchanging management of Japanese companies.

However, the knowledge of expatriates may become unnecessary in the operation of foreign subsidiaries, if either the local employees mature or subsidiaries start targeting the local market. This suggests that Japanese companies may be gradually changing their authority allocation because they have expanded their overseas production since the 1980s and, thus, some foreign manufacturing subsidiaries have now been operating for more than 30 years, while the role of foreign manufacturing subsidiaries in emerging countries, such as those in Southeast Asia, has also changed from export bases to bases for targeting local markets since the 2000s. Given this trend, the relationship between factory performance and expatriates' authority is likely to weaken. Consequently, the results of this paper suggest that authority allocation in Japanese MNCs is changing.

Contributions and implications

This study has three academic contributions. First, we integrate the discussion of authority at headquarters and foreign subsidiaries and that of expatriates' and local employees' authority. By integrating both discussions, we offer a more precise investigation of the relationship between factory performance and each authority. This research shows the potential usefulness of this integrated view for research in this area.

Second, contrary to the common argument in the existing studies, this study illustrates the importance of expatriates' authority in Japanese companies. Japanese expatriates still have the advantage of knowledge, which implies that Japanese ethnocentric management has not changed. However, this management style does not always decrease factory performance. This research clarifies that Japanese MNCs have not yet changed their management style, but this immutability is not necessarily as bad as existing studies argue.

Third, this study suggests that the relationship between factory performance and expatriates' authority may change depending on conditions. If an expatriate does not have unique knowledge or if their knowledge is not needed in foreign subsidiaries, it may not be required for the expatriate to have authority. From the viewpoint of knowledge, our research identified the conditions under which expatriates should have decision-making authority for foreign manufacturing activities.

This study has several managerial implications for practitioners in international management. First, delegating authority to expatriates who understand manufacturing activities in various countries, the situation of other subsidiaries, and customers

and technologies of other countries can improve factory performance when the knowledge of the expatriate is unique to them and valuable to the subsidiary. These findings suggest that managers in MNCs should consider allocating decision-making authority from the viewpoint of knowledge.

Second, we show that it is important for Japanese companies to train expatriates, who have plenty of knowledge that local employees cannot acquire easily. Foreign factories require expatriates until local employees develop or until the foreign subsidiary shifts to a business that does not need expatriates' knowledge. Managers need to consider the balance of authority between expatriates and local employees without exaggerating the localization of talents.

However, our study has several limitations. First, we use data for only subsidiaries in Southeast Asia. Future studies should re-test our analytical model using subsidiaries from different countries. Second, it is not clear whether our findings are unique to Japanese manufacturing subsidiaries or not. More empirical investigation is required using data on the subsidiaries of MNCs of different nationalities. Third, we used cross-sectional data from a single respondent. Although we investigated some relationships using case studies in more detail, we could not check the possibility of endogeneity bias statistically. Moreover, we could not remove the possibility of common method variance completely. Future research requires longitudinal data from multiple respondents.

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