Melco Foundation
Management Accounting Research
Discussion Paper Series

The Melco Foundation

Melco Management Accounting Research Discussion Paper Series

No.MDP2019-002

The Influence of Parent-PMS on Subsidiaries' Decision-Making: Process of Parent-PMS Use and Subsidiaries' External Embeddedness

January 2019

Yudai Onitsuka
Graduate School of Business and Commerce, Keio University
2-15-45 Mita, Minato-ku, Tokyo
108-8345, Japan
e-mail: yudai-onitsuka@keio.jp

The Melco Foundation

Nagoya, Japan

The Influence of Parent-PMS on Subsidiaries' Decision-Making: Process of Parent-PMS Use and Subsidiaries' External Embeddedness

Yudai Onitsuka

Abstract

This study investigates the influence of parent-PMS on subsidiaries' decision-making, and the interaction effects of the parent-PMS use and subsidiaries' external embeddedness. In particular, this study analyzes the moderating effects of the subsidiaries' external embeddedness on the cause-effect relation between parent-PMS use and the influence of parent-PMS on subsidiaries' decision-making. The analyses using survey data from 199 top-managements in Japanese subsidiaries indicate that subsidiaries' embeddedness in customers negatively moderates the influence of the interactive use of PMS by headquarters although subsidiaries' embeddedness in suppliers positively moderates the influence of the interactive use of PMS by headquarters.

Keywords

multinational company, headquarter-subsidiary relationship, control subsidiaries, performance management systems, embedded theory

1. Introduction

Multinational companies' operations, including control over subsidiaries, are difficult to manage due to differences and distances (i.e., physical, geographical, cultural, psychological, and so on) between headquarters and subsidiaries. In addition, market pressures due to developing globalization urged multinational companies (MNCs) to re-design their strategies, structures, and processes (Govindarajan & Gupta, 2000; Ghoshal & Bartlett, 1996). Globalization forced MNCs to seek competitive advantage in the global market through more standardization and coordination within, while simultaneously needing flexibility and local responsiveness (Ezzamel et al., 1999). Moreover, the information and knowledge that subsidiaries can obtain from local environments are also important in generating a competitive advantage in the global market. Hence, headquarters should delegate decision-making capabilities to subsidiaries and encourage autonomy (McEvily & Zaheer, 1999). The international business literature argues that to adapt to such complex environmental and managerial difficulties, MNCs developed considerably from a dominant headquarters with hierarchically-controlled subsidiaries to a complex set of interdependent, globally-dispersed entities structured as multifaceted networks (Dunning & Lundan, 2008; Harzing, 1999). MNCs thus face the challenge of balancing the delegation of decision-making authority to subsidiaries effectively, encouraging subsidiaries' autonomy and independence from headquarters, and coordinating global activities (Busco et al., 2008; Quattrone & Hopper, 2005; Roth & Kostova, 2003).

When MNCs delegate decision-making authority to subsidiaries and encourage autonomy, headquarters must deploy control mechanisms that align subsidiaries' activities with the MNCs' global strategy and offer relevant information for managerial decision-making, both at headquarters and at the subsidiaries (Doz & Prahalad, 1984; Luo 2005). Recently, some management accounting studies find that headquarters performance management systems (parent-PMS) are effective mechanisms to control subsidiaries and their activities into the firm's global strategy (Busco et al., 2008; Dossi & Patelli, 2008, 2010; Mahlendorf et al., 2012; Micheli et al., 2011). These studies argue that parent-PMS provide important information for decision-making at all levels because they reflect the firm's global strategy and intentions, and allow MNCs to monitor and follow subsidiaries' activities. Parent-PMSs integrate subsidiaries' autonomous activities into overall corporate goals by assisting and influencing subsidiaries' decision-making (Mahlendorf et al., 2012). However, prior research does not completely show the effects of parent-PMS on subsidiaries, especially the mechanisms and processes of the effects of parent-PMSs on subsidiaries' decision-making (Busco et al., 2006). The evidence from prior research is mixed and inconsistent.

These issues can be due to two overlooked perspectives. First, prior studies rarely focus on the use of parent-PMS (Dossi & Patteli, 2008; Franco-Santos et al., 2012). While some do consider the use of parent-PMS (i.e., Dossi & Patelli, 2008; Mahlendorf et al., 2012), the results are limited because these studies focus on the purpose of the use of PMS, but not on the process of parent-PMS use. According to Ferreira & Otley (2009), this aspect is important for PMS research to clarify the effects and mechanisms of the influence of PMS within organizations. Moreover, when examining the influence of PMS on decision-makers, it is important to address the use of PMS (Langfield-Smith, 1997; Simons, 2000). Notwithstanding these arguments, most research focuses on

the structural features and aspects of the PMS design, and thus unresolved issues remain about the effects of parent-PMS (Busco et al., 2006; Dossi & Patelli, 2008; Doz et al., 2001; Franco-Santos et al., 2012; Nørreklit & Schoenfeld, 2000; O'Donnell, 2000).

Second, although prior research explains that the effects of parent-PMS relate to the relational attributes of the multinational network (Dossi & Patelli, 2008), which does not sufficiently capture the relationship between headquarters and subsidiaries. Some international business studies argue that when investigating this relationship, it is necessary to focus not only on headquarters' control mechanisms, but also on the external network, which influences subsidiaries' activities directly and indirectly (Andersson & Forsgren, 1996; Doz & Prahalad, 1993; Forsgren, 1989). Based on the resource dependence theory, the characteristics of the networks of each subsidiary explain the different attributes of an MNC (Ghoshal & Bartlett, 1990, 1993). Recently, international business studies point out that the external networks in which the subsidiaries are embedded, referred as external embeddedness, influences the headquarters' control mechanisms (Andersson & Forsgren, 1996; Andersson et al., 2001; Andersson et al., 2005). Similarly, the management accounting literature suggests that the influence of parent-PMS on subsidiaries depend on subsidiaries' external embeddedness (Mahlendorf et al., 2012; Schäffer et al., 2014).

Therefore, this study investigates the influence of parent-PMS on subsidiaries' decision-making, and the relationship between the use of parent-PMS and subsidiaries' external embeddedness. In particular, this study analyzes the moderating effects of the subsidiaries' external embeddedness on the cause-effect relation between parent-PMS and subsidiaries' decision-making by combining theoretical perspectives and the results of data analysis.

This paper proceeds as follows. Section 2 reviews the PMS and international business literature, and establishes the hypotheses. Sections 3 and 4 describe the research methods and results. Section 5 discusses the results, conclusion, contributions, limitations, and avenues for future research.

2. Theoretical backgrounds and hypotheses

2.1. The process of PMS use

In management accounting research, several authors define and categorize the use of PMS. Regarding the use of PMS, Hopwood (1972) explains that firms use PMS to make use of accounting information to evaluate the performance of the organization and management. Similarly, Bourne et al., (2000) argues that the use of PMS is

"split into two main subdivisions; first, the initial use to which they should be put is that of measuring the success of the implementation of that strategy, second, the information and feedback from the measures should be used to challenge the assumptions and test the validity of the strategy (pp. 758)".

In addition to these procedural aspects, Simons (2000) explains the processes of the use of PMS by adopting the diagnostic and interactive control aspects of the levers of control concepts suggested by Simons (1995). In his explanation, the processes of the use of PMS relate to accounting information flow, specifically how information on performance is communicated within organizations when measuring and evaluating performance, the feedback process, and reporting the results of activities to superiors. Henri (2006a) similarly points out that the aspect of accounting information flow is more important in the use of PMS. Moreover, Ferreira & Otley (2009) argue that "the use made of information and controls is a cornerstone of the PMS (pp. 274)", and captures the use of PMS as a way to use accounting information and adopt control mechanisms. They also argue that it is more important to capture how and what types of control practices exist within organizations and the information flow processes in investigating the effects of PMS.

However, there is little research on parent-PMS and its use processes. For example, Dossi & Patell (2008) and Mahlendorf et al., (2012) focus on the purpose of PMS, though do not consider accounting information flow and control practices within MNCs. Hence, it is unclear that how headquarters can control subsidiaries' decisions and actions by using PMS.

Therefore, in this study, the use of PMS is seen not only in its procedural aspects (i.e., the purpose of PMS, measuring and evaluating performance, and reporting and explaining accountability), but also in the processes of. In doing so, we refer to the "diagnostic use of PMS" and "interactive use of PMS" following Simons (1995, 2000) as a typology to capture the processes of PMS use by considering information flow and control practice by headquarters.

2.1.1. Diagnostic use of PMS

Simons (1995) defines diagnostic control as managers' use information systems to monitor organizational outcomes and correct deviations from preset standards of performance. Diagnostic PMS use is the setting of goals and key success factors as opposed to overall strategy, measuring outputs, analyzing variances, and using variance information to adjust activities (Simons, 2000). When managers use PMS diagnostically, they focus on and act to correct business units' and subordinates' activities only when significant issues occur and when they identify significant deviations (Simons, 2000).

Diagnostic PMS use motivates employees to implement organizational strategy and integrate their activities to accomplish the organization's goals (Widener, 2007). Prior research suggests that employees' activities belong to categories that top-managers expect or do not expect so employees can understand how to work to accomplish the organization's goals by using PMS diagnostically (Tuomela, 2005). On the other hand, Henri (2006b) defines the diagnostic use of PMS as a set of formalized procedures that use information to maintain or alter patterns in an organizational activity, and argues that the diagnostic use of PMS has important characteristics as a mechanistic control. Firms can enable tight control and elaborate information and communication flow by using a PMS that includes such characteristics, and thus the diagnostic use of PMS enhances decision-making

capability (Koufteros et al., 2014).

Although there is no empirical evidence on the diagnostic use of parent-PMS in international business settings, we can assume that the effects of parent-PMS on the relationship between headquarters and subsidiaries correspond with the suggestions above. The headquarters sets global strategy and overall goals in advance, and then monitor subsidiaries' activities by using the parent-PMS diagnostically, to integrate subsidiaries' activities into global strategy and the overall goals, similar to a non-international business setting. Hence, the headquarters can use PMS diagnostically to have a positive effect on subsidiaries' decision-making. Therefore, we propose our first hypothesis:

H1. The headquarters' diagnostic use of parent-PMS is positively correlated with the influence of parent-PMS on subsidiaries' decision-making.

2.1.2. Interactive use of PMS

Simons (1995) defines interactive control as managers' use of information systems for their personal involvement in subordinates' decision activities. The interactive use of PMS is very different from diagnostic use. When managers use PMS interactively, they constantly communicate their intent to subordinates and participate in subordinates' decision activities to adapt these activities to strategic uncertainties and to find opportunities to grow their business (Simons 2000). Thus, in organizations in which managers use PMS interactively, all members are constantly interested in information about performance because communicating this information is a daily activity.

The distinct characteristics of the interactive use of PMS include frequent meetings and face-to-face discussions about performance between superiors and subordinates (Bisbe et al., 2007), which allow an organization to deal effectively with problems. Hence, interactively using PMS helps firms make decisions by communicating information about performance to decision-makers and sending signals throughout the organization (Abernethy & Brownell, 1999; Bisbe & Otley, 2004; Henri, 2006b). In addition, empirical evidence suggests that the interactive use of PMS enables headquarters to capture all of the activities and conditions within an organization, and enhances decision-making capabilities, resulting in overall financial performance (Koufteros et al., 2014).

In MNCs, the headquarters' interactive use of PMS stimulates dialog between headquarters and subsidiaries and enhances strategic alignment within an organization (Dossi & Patelli, 2010). Conversely, subsidiaries might understand the headquarter's intent, their decision making, and the behaviors it expects. Therefore, our second hypothesis is as follows:

H2. The interactive use of parent-PMS by headquarters is positively correlated with the influence of parent-PMS on subsidiaries' decision-making.

2.2. Embeddedness perspective

As mentioned in section 1, we should account for the external network embeddedness, which affects both the subsidiaries' activities and the headquarters' control mechanisms, when investigating the relationship between headquarters and subsidiaries (Andersson & Forsgren, 1996; Doz & Prahalad, 1993; Forsgren, 1989). Polyani (1957) proposed embeddedness theory, which Granovetter (1985) developed further. The concept of embeddedness assumes that social structures have a significant influence on economic behavior. Granovetter (1985) argues that all economic behaviors have structural aspects, and that a certain mechanism of one's behavior can be understood by considering the relations with others in social structures. Moreover, Granovetter (1992) argues that because an organization is embedded in social relations, it cannot behave freely like an "atom." Thus, an organization's behavior can be subject to relationships with others in social structures based on the degree that it is embedded in the social structures (Granovetter, 1992).

Most business studies referring to embeddedness theory focus on the influence of the network in which the organizations relate and their embeddedness in the network on organizations' behaviors, the structuring processes of resources and capabilities, and performance (Gulati, 1998, 1999). In the past two decades, some studies focus on the relationship between headquarters and subsidiaries in terms of embeddedness theory, and investigate the influence of subsidiaries' external embeddedness on their behaviors (e.g., Andersson & Forsgren, 1996; Mahlendorf et al., 2012; Schäffer et al., 2014). According to Andersson & Forsgren (1996), subsidiaries' external embeddedness is the extent to which they relate to local counterparts and is embedded in local networks. These studies argue that subsidiaries' external embeddedness significantly influences the effects of the control mechanisms implemented by headquarters to control subsidiaries' behaviors.

2.2.1. Interaction effects of the use of PMS and subsidiaries' external embeddedness

According to network and embeddedness theory, subsidiaries have two criteria when they decide on their behaviors (Forsgren et al., 2005; Ghoshal & Westney 1993): the control mechanisms implemented by headquarters to integrate subsidiaries' behavior into global strategy and overall goals and the subsidiaries' embeddedness in local networks. When a subsidiary is highly embedded in local networks, it has more information and knowledge peculiar to the local market and behaves based on this information and knowledge. In some cases, the headquarters lacks the necessary knowledge to manage worldwide operations and encounters from uncertainty about subsidiaries' behaviors (Ciabuschi et al., 2012; Forsgren & Holm, 2010). In this situation, the distances between headquarters and subsidiaries are extended, and headquarters will capture and understand subsidiaries' behaviors and norms less, and therefore cannot appropriately control their behaviors (Bouquet & Birkinshaw, 2008; Helliwell, 2002). Thus, it becomes more difficult for headquarters to control subsidiaries' behaviors when they are extensively embedded in local networks (Andersson & Forsgren, 1996).

However, recent empirical management accounting studies show that a subsidiary's higher external

embeddedness enhances the influence of parent-PMS on subsidiaries' decision-making (Mahlendorf et al., 2012). This argument can be understood as a suggestion that parent-PMSs are a mechanism to achieve high levels of coordination and integration in highly decentralized MNCs and to successfully combine local autonomy and global goal congruence (Busco et al., 2008; Andersson et al., 2002; Dossi & Patelli, 2008).

However, these effects do not always occur due to PMS alone. Research on PMS in MNCs suggests that capturing critical areas and key factors, and communicating these factors between headquarters and subsidiaries is more important, especially in highly decentralized MNCs (Busco et al., 2008; Dossi & Patelli, 2010; Mahlendorf et al., 2012). Other research also suggests that understanding the business environment well can enhance all decision-making capabilities within highly decentralized MNCs (Aharoni et al., 2010). On the other hand, subsidiaries' decisions and actions are more uncertain for headquarters when subsidiaries have high embeddedness. In such highly uncertain cases, the interactive use of PMS is more appropriate than diagnostic use is (Simons, 1995, 2000).

Based on these studies, we expect that when a subsidiary is extensively embedded, the influence of parent-PMS on the subsidiary's decisions and actions depend on the characteristics of the use of the parent-PMS. While a parent-PMS can affect subsidiaries' decisions and actions when the system can capture the critical factors, and when the firm conducts frequent communication, feedback, and follow-up through the parent-PMS, especially in highly decentralized MNCs, the parent-PMS cannot affect subsidiaries' decisions if the parent-PMS lacks a clear process when subsidiaries' are extensively embedded. In other words, depending on the different uses of parent-PMS, its influence on subsidiaries' decisions and actions might change when subsidiaries are extensively embedded. Thus, we assume that subsidiary embeddedness positively (negatively) moderates the cause-effect relation between the interactive (diagnostic) use of parent-PMS and the influence of the parent-PMS on subsidiary decision-making.

There are various concepts of embeddedness in business networks (Halinen & Tornroos, 1998). However, investigating all embeddedness is insubstantial and not rational (Kadushin 2012). Hence, in line with prior research (e.g. Andersson & Forsgren, 1996; Andersson et al., 2001), we focus on subsidiaries' relationships with the local customers and suppliers that influence subsidiaries' products and services, and product- and service-related processes. In highly decentralized MNCs, subsidiaries need to flexibility respond to the needs of local counterparts in order to accomplish the MNC's and subsidiaries' strategy (Forsgren et al., 2005; Martinez & Jarillo, 1989). Therefore, we propose the following hypotheses:

H3a. The subsidiaries' embeddedness with local customers negatively moderates the relationship between the diagnostic use of the parent-PMS by headquarters and the influence of the parent-PMS on subsidiaries' decision-making.

H3b. The subsidiaries' embeddedness with local suppliers negatively moderates the relationship between the diagnostic use of the parent-PMS by headquarters and the influence of the parent-PMS on subsidiaries' decision-making.

H4a. The subsidiaries' embeddedness with local customers positively moderates the relationship between the interactive use of the parent-PMS by headquarters and the influence of the parent-PMS on subsidiaries' decision-making.

H4b. The subsidiaries' embeddedness with local suppliers positively moderates the relationship between the interactive use of the parent-PMS by headquarters and the influence of the parent-PMS on subsidiaries' decision-making.

3. Method

3.1. Data collection

Data were collected through a mailed questionnaire-based survey addressed to 1,520 top managers of Japanese subsidiaries of foreign MNCs in September 2016. The questionnaires were mailed due to the large difference in the perception of control and practice of decision-making between headquarters and subsidiaries. Therefore, we cannot observe the real influence of control systems on subsidiaries' decision-making and subsidiaries' external environment, such as subsidiaries' embeddedness directly (Andersson & Forsgren, 1996; Mahlendorf et al., 2012). The total sample is 199 questionnaires (a response rate of 13%) after removing some samples that lack data. The sample includes both manufacturing and non-manufacturing industries. To test whether respondents and non-respondents have different industries, we use Chi-square statistics and find that respondent and non-respondent firms had the same distribution across industries ($p > .10$). Hence, we find no non-respondent bias in terms of firm industry.

3.2. Variables

To ensure comparability with other studies and to enhance internal validity of contents, we adopt constructs and measures established by prior research. We altered some constructs and measures slightly to adapt to the MNC setting. Appendix A reports the constructs and measures used in this study and the descriptive statistics. To measure the diagnostic (DUSE) and interactive (IUSE) use of parent-PMS, which are independent variables, we follow Henri (2006b), Simons (1995, 2000), and Widener (2007). We use 11 items measured on seven-point Likert-type scales (1 = not at all; 7 = to a high extent)[1] . In terms of the reliability of the variables, the Cronbach's α of IUSE is .850 and that of DUSE is .639. While DUSE is not highly reliable, it is within a permissible range for analysis (Hair et al., 1998).

To measure subsidiaries' embeddedness with local customers (EMBC) and suppliers (EMBS), which are moderating variables in this study, we measured 2 items using seven-point Likert-type scales (1 = not at all; 7 =

[1] DUSE includes 6 items and IUSE includes 5 items, but we removed one DUSE item due to the selling effect.

Table 1

Exploratory factor analysis results: Influence of parent-PMS on subsidiaries' decisions [a,b]

	1	2	3
Incentive scheme decisions	***.930***	.023	-.099
Target setting decisions for employees	***.792***	-.127	.179
Human resource decisions	***.775***	.072	.121
Decisions about performance evaluation	***.733***	.050	-.128
Responsibility accounting decisions	***.514***	.008	.399
R&D planning and control decisions	.007	***.859***	-.081
Production planning decisions	-.081	***.803***	.067
Making or buying decisions	-.136	***.761***	.201
Investment decisions	.251	***.718***	-.245
Supply chain management decisions	.019	***.625***	.185
Target setting decisions for employees	.021	-.092	***.987***
Distribution channel decisions	.065	.027	***.809***
Pricing decisions about products or services	-.059	.121	***.732***
Cronbach's α	.814	.806	.771

[a]promax rotation

[b]contribution rate: 74.771%, eigenvalue: 1.215

Table 2

Correlation matrix

Variables	INF-C	INF-D	INF-S	DUSE	IUSE	EMBC	EMBS
INF-C	1						
INF-D	.310**	1					
INF-S	.658**	.461**	1				
DUSE	.236**	.211**	.158*	1			
IUSE	.366**	.205**	.288**	.705**	1		
EMBC	.073	.249**	.101	.141	.187**	1	
EMBS	.122	.213**	.104	.055	.097	.482**	1

*p<.05, **p<.01. All tests are two-tailed

Abbreviations: INF-C = the influence of parent-PMS on subsidiaries internal control decision-making; INF-D = the influence of parent-PMS on subsidiaries decision-making about developing products and/or services INF-S = the influence of parent-PMS on subsidiaries decision-making about selling processes DUSE = diagnostic use of parent-PMS; IUSE = interactive use of parent-PMS; EMBC = subsidiaries embeddedness in local customers; EMBS = subsidiaries embeddedness in local suppliers.

to a high extent) following Andersson & Forsgren (1996). Scale reliability is satisfactory, with a Cronbach's α of EMBC of .700 and EMBS of .890.

To measure the influence of parent-PMS on subsidiaries' decision-making, we refer to Dossi & Patelli (2008) and Mahlendorf et al. (2012) and use 14 items measured on seven-point Likert-type scales (1 = not at all; 7 = to a high extent). Prior studies adopt these items as one variable to analyze. However, it is difficult to adopt this approach due to the differing contents and aspects of these items. Hence, we perform an exploratory factor analysis in this study and find that 14 items loaded on three factors (Table 1)[2] . The first of the three factors includes 5 items concerning control within the subsidiaries (INF-C). The second includes 5 items about developing products and/or services in subsidiaries (INF-D). The final factor includes 3 items related to decisions about selling processes at subsidiaries (INF-S). The Cronbach's α is .814 for INF-C, .806 for INF-D, and .771 for INF-S, which are satisfactory. Table 2 shows the Pearson's correlation coefficients across the variables.

4. Results

4.1. The results of main analyses

We can summarize the six hypotheses in two basic models:

$$Y_{1,2,3} = \alpha_1 + \beta_1 DUSE + \beta_2 IUSE + \beta_3 EMBC + \beta_4 EMBS + + \Sigma Controls + \varepsilon \quad (1)$$

$$\begin{aligned} Y_{1,2,3} = {} & \alpha_1 + \beta_1 DUSE + \beta_2 IUSE + \beta_3 EMBC + \beta_4 EMBS + \beta_5 DUSE \times EMBC \\ & + \beta_6 DUSE \times EMBS + \beta_7 IUSE \times EMBC + \beta_8 IUSE \times EMBS \\ & + \Sigma Controls + \varepsilon \end{aligned} \quad (2)$$

where Y 1 = the influence of parent-PMS on subsidiaries internal control decision-making (INF-C), Y2 = the influence of the parent-PMS on subsidiaries decision-making about developing products and/or services (INF-D), Y3 = the influence of the parent-PMS on subsidiaries decision-making about selling processes (INF-C), α is the intercept, β_s are regression coefficients, ΣControls = control variables, and ε = error term.

To test these models, we conducted a hierarchical regression analysis. Regression-based methods may be suitable to test these models compared to covariance-based methods because the models and measures in international business research are considered as to be at an early stage of development and lack substantial empirical evidence, and because the hypotheses include interaction effects (Schäffer et al., 2014; Venaik et al., 2005).

Table 3 reports the analysis results. Model 1 focuses on the main effects of different types of PMS use on subsidiaries' decision-making, and thus focuses on H1 and H2. In Model 1, the direct effects of the diagnostic use of parent-PMS (DUSE) on all independent variables (INF-C, INF-D, and INF-S) are not statistically significant.

---

[2] We removed one item because its factor loading was below .50.

Table 3
Hierarchical regression results

		INF-C		INF-D		INF-S	
		Model1c	Model2c	Model1d	Model2d	Model1s	Model2s
Independent variables							
DUSE	H1	-.020	-.034	.156	.146	-.062	-.087
IUSE	H2	***.411******	***.406****	.059	.069	***.354****	***.374****
EMBC		-.074	-.078	.185	.186	.028	.029
EMBS		.153	.141	.109	.097	.114	.095
DUSE×EMBC	H3a		-.151		.312		.275
DUSE×EMBS	H3b		-.022		-.157		-.208
IUSE×EMBC	H4a		-.045		***-.378****		***-.354****
IUSE×EMBS	H4b		.191		***.263****		***.325****
Control variables							
ESTTYPE		.093	.105	-.058	-.046	-.080	-.070
ESTYEAR		-.085	-.100	-.072	-.078	-.064	-.072
SIZE		.086	.068	.071	.041	.016	-.016
INDUSTRY		-.048	-.045	.069	.075	-.037	-.027
R^2		.190	.221	.147	.187	.138	.181
ADJ. R^2		.135	.144	.089	.107	.079	.101
F-VALUE		3.449***	2.894**	2.536**	2.342**	2.355*	2.263**

*p<.05, **p<.01, ***p<.001. All tests are two-tailed

Abbreviations: INF-C = the influence of parent-PMS on subsidiaries internal control decision-making; INF-D = the influence of parent-PMS on subsidiaries decision-making about developing products and/or services INF-S = the influence of parent-PMS on subsidiaries decision-making about selling processes DUSE = diagnostic use of parent-PMS; IUSE = interactive use of parent-PMS; EMBC = subsidiaries embeddedness in local customers; EMBS = subsidiaries embeddedness in local suppliers; ESTTYPE = types of establishment of subsidiaries (0 = green-field investment; 1 = M&A); ESTYEAR = past years since subsidiaries has been involved in present MNCs; SIZE = size of subsidiaries; INDUSTRY = industry dummies (0 = non-manufacturing; 1 = manufacturing).

Therefore, H1 is not supported. For H2, the direct effects of the interactive use of parent-PMS (IUSE) on the influence of parent-PMS on subsidiaries' internal control decision-making (INF-C, standardizedβ= .411; p= .000) and decision-making about selling processes (INF-C, standardizedβ= .354; p= .003) are significant, although the direct effect of the influence of parent-PMS on subsidiaries' decision-making about products and/or services development is not significant (INF-D, p> 0.1). Therefore, H2 is partially supported and all control variables are not significant.

Model 2 focuses on the interaction effects between different types of PMS use and subsidiaries' embeddedness; thus, Model 3 reflects, H3a, 3b, 4a, and 4b. The results do not confirm a significant interaction effect for H3, so H3a and H3b are not supported. On the other hand, for H4a, the negative interaction effects between IUSE and EMBC on INF-D (standardizedβ= -.378; p= .021), and on INF- S (standardizedβ= -.354; p= .031) are significant. Conversely, the positive interaction effects between IUSE and EMBS on INF-D (standardizedβ= .263; p= .048) and INF-S (standardizedβ= .325; p= .015) are significant. Thus, the results partially support and partially reject H4a and H4b, respectively.

4.2. The results of supplemental analyses

The results above show that some interaction effects are statistically significant. In this analysis, we report the results of a simple slope analysis to clarify and confirm the moderating effects of a subsidiary's embeddedness with local customers and suppliers. In line with prior research (e.g. Aiken & West, 1991; Cohen et al., 2002) , our simple slope analysis uses the using moderator values at one standard deviation above and below the mean. Figure 1 illustrates the results of the analyses with a focus on the moderating effect of EMBC. The cause-effect relationship between IUSE and INF-D is not significant when EMBC is above the mean, though we confirm a significant relationship between IUSE and INF-D when EMBC is below the mean (standardizedβ= .184; p= .047). On the other hand, the positive cause-effect relationship between IUSE and INF-S is significant, both when EMBC is above (standardizedβ= .220; p= .029) and below (standardizedβ= .302; p= .000) the mean. Thus, the interactive use of parent-PMS is likely to have a high (low) influence when subsidiaries' embeddedness in local customers is low (high).

Figure 1

The moderating effects of subsidiaries embeddedness in local customers

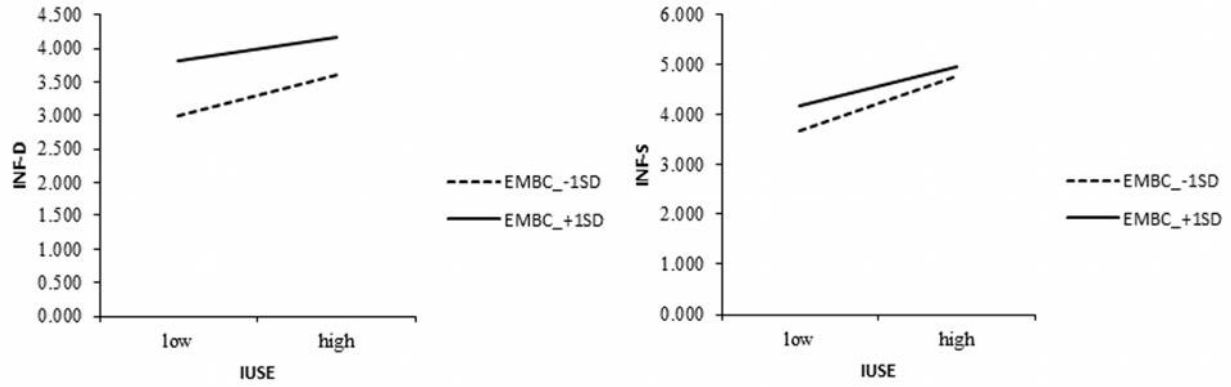
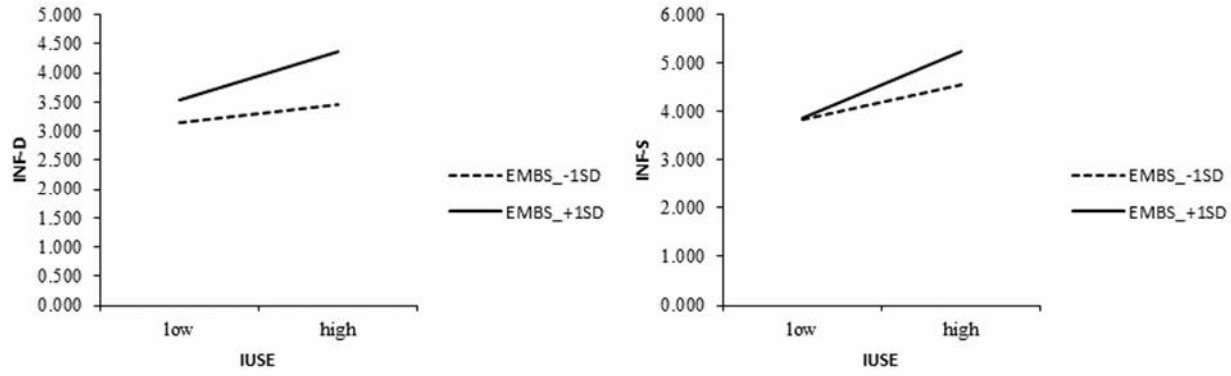


Figure 2

The moderating effects of subsidiaries embeddedness in local suppliers



In contrast, Figure 2 illustrates the results of the analyses of the moderating effect of EMBS. The cause-effect relation between IUSE and INF-D is significant only when EMBS is above the mean (standardizedβ= .255; p= .015), while the cause-effect relation between IUSE and INF-S is significant both when EMBS is above (standardizedβ= .386; p= .000) and below (standardizedβ= .201; p= .033) the mean. These results suggest that the use of parent-PMS is likely to have a high (low) influence when subsidiaries' embeddedness with local suppliers is high (low).

5. Discussion and Conclusion

5.1. Relevant findings and contributions

This study examines the relationships among the use of parent-PMS, subsidiaries' embeddedness, and subsidiaries' decisions, especially the cause-effect relations between the different types parent-PMS use and subsidiaries' decisions, and the moderating effects of subsidiaries' embeddedness on these cause-effect relations. We test six hypotheses using survey data collected from 199 Japanese subsidiary top managers. The results show some relevant findings that extend and contribute to the present discussion about the effects of parent-PMS in MNCs.

First, by reviewing and summarizing relevant studies that focus on the use of PMS, we generate two hypotheses about the effects of the different types of parent-PMS use (H1, H2). The results show the cause-effect relationship between the interactive use of PMS by headquarters and the influence of parent-PMS on subsidiaries' decisions, though we find no statistically significant effect of the diagnostic use of PMS by headquarters. It suggests that the influence of parent-PMS on subsidiaries' decisions is subject to information flow and control practice. Thus, we argue that by using PMS interactively, headquarters can influence subsidiaries' decisions and thus integrate their actions into the company's overall goals. By using PMS interactively, subsidiaries can frequently communicate and share relevant information and thoughts to accomplish the overall strategy with their headquarters (Dirks and Ferris, 2002; Dossi & Patelli, 2010; Maley & Moeller, 2014). Hence, subsidiaries' decisions and actions might be in line with the intentions of headquarters and overall strategy.

Prior research offers empirical evidence about the determinants of the decision-influencing use of a parent-PMS (e.g. Dossi & Patelli 2008; Mahlendorf et al., 2012), while other studies focus on the interactive use of a parent-PMS by headquarters (e.g. Dossi & Patelli 2010; Schäffer et al., 2014). However, these studies do not provide evidence on or the implications of how can headquarters control subsidiaries' decisions and actions using PMS. This study overcomes these limitations in prior studies and focuses on the processes of the use of PMS in terms of information flow and control practices, and shows how and which types of a headquarters' use of PMS can influence subsidiaries' decisions. Hence, our empirical evidence can complement and extend the findings in prior research. Furthermore, the results of this study support the arguments of prior studies that the effects of PMS within organizations depend on the use of PMS (e.g. Koufteros et al., 2014; Henri, 2006a). Therefore, these findings are an important contribution to PMS research, especially in the MNC setting.

Second, to consider the effects of local networks and counterparts on subsidiaries' decisions and actions from the perspective of embeddedness theory. We test four hypotheses about the interaction effect of parent-PMS use and subsidiaries' external embeddedness (H3, H4). The results show that the subsidiaries' embeddedness with local customers negatively moderates the positive influence of the interactive use of PMS on subsidiaries' decisions. This result supports empirical evidence in international business research showing that subsidiaries' embeddedness negatively affects the headquarters' control mechanisms (e.g. Andersson & Forsgren, 1996) compared to the PMS research in the MNC setting (e.g. Mahlendorf et al., 2012). We can understand this a firms' actions to adapt to local customers' needs via subsidiaries. MNCs should integrate a variety of needs, information, and knowledge of local markets into innovation to acquire competitive advantages in both the global and local markets, especially in Japan (Blahová et al., 2015). In doing so, subsidiaries must be embedded in the local market to obtain this information and knowledge (Johanson and Vahlne, 2009). Consequently, subsidiaries' embeddedness with local customers might prevail against the parent-PMS. Thus, subsidiaries' embeddedness with local customers negatively moderates the influence of the interactive use of PMS by headquarters on subsidiaries' decisions.

On the other hand, we find a positive moderating effect of subsidiaries' embeddedness with local suppliers on the cause-effect relationship between the interactive use of PMS by headquarters and the influence of the parent-PMS on subsidiaries' decisions. This result is in contrast to the result for customer embeddedness. Subsidiaries' embeddedness that influences products and/or services enhance overall organizational performance, which the parent-PMS can capture and influence (Andersson et al., 2005). MNCs can effectively control Japanese subsidiaries' decisions and actions by understanding and adapting to buyer-supplier relationships in the Japanese market (Schlunze, 2004). Hence, the headquarters can capture the relationship between subsidiaries and local suppliers using PMS interactively. Thus, it can communicate important information to subsidiaries. In addition, it may explain the result that the extent to which headquarters' delegate authority for developing products and/or services to subsidiaries is relatively low (see Appendix B).

The findings on subsidiaries' embeddedness extend the discussions in both the international business and PMS literature. For PMS research, the empirical evidence in this research helps to reveal the mechanisms and processes of the effects of PMS in combination with the empirical evidence on the use of PMS. These results suggest that the effects of PMS depend not only on the type of PMS use, but also on the embeddedness in networks. Although this study investigates only subsidiaries' external embeddedness, other types of embeddedness (i.e., internal embeddedness in terms of the dependencies of business units on headquarters) might have important impacts on the effects of PMS. In international business research, few studies classify embeddedness according to local counterparts, though prior research considers many types of embeddedness. Thus, this study helps to extend the discussion on subsidiaries' embeddedness by showing empirical evidence of the impacts of subsidiaries' embeddedness depend on the type of local counterpart. However, future research should investigate why the impacts of embeddedness differ depending on the type of local.

5.2. Implications

This study also has implications for MNCs. The results show that by using parent-PMS interactively, the headquarters can affect subsidiaries' decision-making, and can obtain goal congruence between headquarters and subsidiaries. More precisely, it is important for highly decentralized MNCs to frequently communicate and discuss both global and local performance with subsidiaries to capture and share critical areas of the business and key factors. This suggestion is in line with Maley & Moeller's (2014) argument that frequent communication, feedback, and follow-up through parent-PMS are important characteristics to integrate subsidiaries' decisions and actions into global strategy. They argue that when the process of PMS use lacks these characteristics, subsidiaries have less trust in headquarters, and might thus disobey the intentions of headquarters.

5.3. Limitations, and suggestions for the future research

Although this study presents relevant findings, they are subject to some limitations. The first is related to data collection and the target companies. The results of this study can be compared with other studies that focus on similar themes and/or use similar measures in a survey, but that obtain different results. This research has some peculiarities because the target of this survey is Japanese subsidiaries. Thus, for subsidiaries in other countries, our results not be applicable. The second limitation is a perception gap between headquarters and subsidiaries. In this study, we investigate the real influence of parent-PMS on subsidiaries' decisions and actions and the extent of the effect of subsidiaries' embeddedness, though because the survey targeted subsidiaries, the results may not reflect the thoughts and intentions of the parent headquarters.

Future research could extend the findings of this study by overcoming these limitations or focusing on other questions. For example, a case study would clarify why and how subsidiaries' embeddedness moderates the influence of parent-PMS. In addition, by focusing on both headquarters and subsidiaries simultaneously, a future study could consider the perception gap between headquarters and subsidiaries. Furthermore, it is necessary to focus on the relationships among the structural features and aspects of the design, purpose, and procedural aspects of PMS use. This study accounts for information flow to reveal the processes of PMS use by headquarters and its influence on subsidiaries. However, we assume that appropriate information flow depends on the design, purpose, and procedural aspects of PMS. In other words, there might be a "fit" among these elements, which is a relevant topic for future research to extend the findings.

Appendix A: Constructs, measures and descriptive statistics

Influence of parent-PMS on decision-making

To what extent does the parent-PMS influence your decision-making on the following items?

(1 = not at all; 7 = to a high extent)

	N	Min	Max	Mean	SD
Budgeting decisions	199	1	7	5.05	1.41
Pricing decisions about products or services	199	1	7	4.65	1.772
Decisions about performance evaluation	198	1	7	4.64	1.852
Target setting decisions for employees	199	1	7	4.52	1.941
Incentive scheme decisions	199	1	7	4.51	1.885
Human resource decisions	199	1	7	4.38	1.762
Choosing target customer decisions	199	1	7	4.37	2.005
Responsibility accounting decisions	199	1	7	4.30	1.930
Distribution channel decisions	198	1	7	4.12	2.098
Investment decisions	198	1	7	3.94	2.034
Making or buying decisions	185	1	7	3.66	2.074
Production planning decisions	182	1	7	3.65	2.114
Supply chain management decisions	194	1	7	3.56	2.069
R&D planning and control decisions	189	1	7	3.49	2.041

Diagnostic and interactive use of PMS

To what extent do you agree to the following statements about how to use of the parent-PMS?

(1 = not at all; 7 = to a high extent)

	N	Min	Max	Mean	SD
Diagnostic use of PMS					
The parent-company uses the PMS to monitor performance and results of your Japanese company's operations.	199	1	7	5.24	1.651
The parent-company uses the PMS to track progress of your Japanese company's activities towards goals.	199	1	7	5.24	1.621
The parent-company relies heavily on staff specialists in preparing and interpreting information from the parent-PMS.	199	1	7	3.98	1.592
You and/or your Japanese company's employees pay attention on the parent-PMS when exception to the parent-PMS happen.	199	1	7	3.06	1.479
The parent-company pays attention on the activities of your Japanese company only when the parent-company knows exception to a plan happened through the parent-PMS.	198	1	7	3.30	1.727

	N	Min	Max	Mean	SD
Interactive use of PMS					
The parent-PMS enables continual challenge and debate of underlying data, assumption and action plan.	199	1	7	4.86	1.642
The parent-PMS enables discussion in meetings with the parent-company and other employees.	199	1	7	4.84	1.584
The parent-company has paid attention on day-to-day activities of your Japanese company through the parent-PMS.	199	1	7	4.86	1.589
You and/or your Japanese company's employees have paid day-to-day attention to the parent-PMS.	199	1	7	4.86	1.614
Formal meetings are frequently held with the participation of employees in both the parent-company and your Japanese company to discuss the parent-PMS.	199	1	7	4.86	1.708

Subsidiaries embeddedness

To what extent have relationships with the following local Japanese stakeholders caused your Japanese company to change its products/services or operation processes?

(1 = not at all; 7 = to a high extent)

	N	Min	Max	Mean	SD
Subsidiaries embeddedness in local customers					
Relationships with local Japanese customers have caused changes in products/services.	199	1	7	5.38	1.440
Relationships with local Japanese customers have caused changes in production technologies/service processes.	199	1	7	4.95	1.695
Subsidiaries embeddedness in local suppliers					
Relationships with local Japanese suppliers have caused changes in products/services.	194	1	7	3.63	2.030
Relationships with local Japanese suppliers have caused changes in production technologies/service processes.	196	1	7	3.52	1.962

Appendix B: Descriptive statics of subsidiaries decision-making authority delegated by headquarters

	Min	Max	Mean	SD
Choosing target customer decisions	1	7	6.11	1.149
Target setting decisions for employees	2	7	5.96	1.145
Distribution channel decisions	1	7	5.88	1.303
Responsibility accounting decisions	1	7	5.70	1.234
Human resource decisions	1	7	5.29	1.357
Incentive scheme decisions	1	7	5.15	1.527
Pricing decisions about products or services	1	7	5.07	1.563
Budgeting decisions	1	7	4.82	1.273

Decisions about performance evaluation	1	7	4.71	1.630
Supply chain management decisions	1	7	4.27	1.997
Making or buying decisions	1	7	3.85	2.063
Production planning decisions	1	7	3.40	2.078
Investment decisions	1	7	3.30	1.735
R&D planning and control decisions	1	7	3.02	1.802

References

Abernethy, M. A., and Brownell, P. (1999). The Role of Budgets in Organizations Facing Strategic Change: An Exploratory Study. *Accounting, Organizations and Society* 24(3), 189–204.

Aharoni, Y., Tihanyi, L. and Connelly, B.L. (2010). Managerial decision-making in international business: a forty-five-year retrospective. *Journal of World Business* 46(2), 135-42.

Aiken, L. S. and S. G. West. (1991). *Multiple Regression: Testing and Interpreting Interactions*. London: Sage.

Andersson, U., I. Björkman, and M. Forsgren. (2005). Managing subsidiaries knowledge creation: The effect of control mechanisms on subsidiaries local embeddedness. *International Business Review* 14(5), 521-538.

Andersson, U., and M. Forsgren. (1996). Subsidiaries embeddedness and control in the multinational corporation. *International Business Review* 5(5), 487-508.

Andersson, U., Forsgren, M. and Holm, U. (2002). The Strategic Impact of External Networks: Subsidiaries Performance and Competence Development in the Multinational Corporation. *Strategic Management Journal* 23(11), 979–96.

Andersson, U., M. Forsgren, and T Pedersen. (2001). Subsidiaries performance in multinational corporations: the importance of technology embeddedness. *International Business Review* 10(1), 3-23.

Bisbe, J., Batista-Foguet, J. M., and Chenhall, R. H. (2007). Defining Management Accounting Constructs: A Methodological Note on the Risks of Conceptual Misspecification. *Accounting, Organizations and Society* 32(7–8), 789–820.

Bisbe, J., and Otley, D. (2004). The Effects of the Interactive Use of Management Control Systems on Product Innovation. *Accounting. Organizations and Society* 29(8), 709–37.

Bourne, M., J. Mills, M. Wilcox, A. Neely, and K. Platts. (2000). Designing, implementing and updating performance measurement systems. *International Journal of Operations and Production Management* 20(7), 754-771.

Bouquet, C., and Birkinshaw, J. (2008). Weight versus Voice: How Foreign Subsidiaries Gain Attention from Corporate Headquarters. *Academy of Management Journal* 51 (3), 577–601.

Blahová, M., Haghirian, P., and Pálka, P. (2015). Major factors affecting contemporary Japanese business environment. *International Journal of Productivity and Performance Management* 64(3), 416 – 433.

Busco, C., M. Frigo, E. Giovannoni, A. Riccaboni, and W. Scapens. (2006). Integrating Global Organizations through Performance Measurement Systems. *Strategic Finance* 87(7), 30-35.

Busco, C., E. Giovannoni, and R. W. Scapens. (2008). Managing the tensions in integrating global organisations: The role of performance management systems. *Management Accounting Research* 19(2), 103-125.

Ciabuschi, F., Forsgren, M. and Martin, O. M. (2012). HeadquartersbInvolvement and Efficiency of Innovation Development and Transfer in Multinationals: A Matter of Sheer Ignorance? *International Business Review* 21(2), 130–44.

Cohen, J., Cohen, P., West, G. S., and Aiken, L. S. (2002). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences 3rd edition*. Routledge.

Dirks, K. T. and D. T. Ferris. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology* 87(4), 611-628.

Dossi, A., and L. Patelli. (2008). The decision-influencing use of performance measurement systems in relationships between headquarters and subsidiaries. *Management Accounting Research* 19(2), 126-148.

Dossi, A., and L. Patelli. (2010). You learn from what you measure: financial and non-financial performance measures in multinational companies. *Long Range Planning* 43(4), 498-526.

Doz, Y. and Prahalad, C. K. (1993). Managing DMNCs: A Search for a New Paradigm, in Ghoshal, S. and Westney, D. E. (Eds), *Organization Theory and the Multinational Corporation*. St. Martins Press, New York.

Doz, Y.L. and C. K. Prahalad. (1984). Patterns of strategic control within multinational corporations. *Journal of International Business Studies* 2(Autumn), 55-72.

Doz, Y. L., Santos, J., Williamson, P. (2001). *From Global to Metanational: How Companies Win in the Knowledge Economy*. Harvard Business School Press, Boston, MA.

Dunning, J.H. and Lundan, S.M. (2008). *Multinational Enterprises and the Global Economy*. Edward Elgar, Cheltenham.

Ezzamel, M., H. Willmott, and F. Worthington. (1999). Accounting, organisational transformation and work organisation. In: *Working paper presented at the Accounting, Organisations and Society Conference on "Accounting, Organisational Transformation and New Organisational Forms,* Los Angeles, November 4–6.

Franco-Santos, M., L. Lucianetti, and M. Bourne. (2012). Contemporary performance measurement systems: A review of their consequences and a framework for research. *Management Accounting Research* 23(2), 79-119.

Ferreira, A., and D. Otley. (2009). The design and use of performance management systems: An extended framework for analysis. *Management Accounting Research* 20(4), 263-282.

Forsgren, M. (1989). *Managing the Internationalization Process*. The Swedish Case. Routledge,London.

Forsgren, M. and Holm, U. (2010). MNC Headquarters' Role in Subsidiaries' Value-creating Activities: A Problem of Rationality or Radical Uncertainty. *Scandinavian Journal of Management* 26(4), 421-430.

Forsgren, M., Holm, U., and Johanson, J. (2005). *Managing the Embedded Multinational: A Business Network View*. Edward Elgar, Cheltenham.

Ghoshal, S. and Bartlett, C. A. (1990). The Multinational Corporation as an Interorganisational Network. *Academy of Management Review* 15(4), 603-625.

Ghoshal, S. and Bartlett, C. A. (1993). The Multinational Corporation as an Interorganisational Network, in Ghoshal, S. and Westney, E. D. (Eds), *Organization Theory and the Multinational Corporation*. St. Martins Press, New York.

Ghoshal, S., and Bartlett, C.A. (1996). Rebuilding behavioural context: a blueprint for corporate renewal. *Sloan Management Review* 37, 23-36.

Ghoshal, S. and Westney E. D. (1993). Introduction and Overview, in Ghoshal, S. and Westney E. D. (Eds), *Organization Theory and the Multinational Corporation*. St. Martins Press, New York.

Gulati, R. (1998). Alliances and networks. *Strategic Management Journal* 19, 293-317.

Gulati, R. (1999). Network location and learning: The influence of network resources and firm capabilities on alliance formation. *Strategic Management Journal* 20, 397-420.

Govindarajan, V., and Gupta, A. (2000). Analysis of the emerging global arena. *European Management Journal* 18, 274-284.

Granovetter, M. (1985). Economic action and social structure: the problem of embeddedness. *American Journal of Sociology* 78(3), 3-30.

Granovetter, M. (1992). Problems of explanation in economic sociology, in Nohria, N. and R. G.Eccles (Eds.), *Networks and organizations: Structure, for M&A action*. Boston, MA: Harvard Business School Press.

Halinen, A., and Tornroos, J. A. (1998). The role of embeddedness in the evolution of business networks. *Scandinavian Journal of Management* 14(3), 187–205.

Hair, J. F., R. E. Anderson, R. L. Tatham, and W. C. Black. (1998). *Multivariate Data Analysis. 5th edition*. Upper Saddle River, New Jersey: Prentice Hall.

Harzing, A.W. (1999). *Managing the Multinationals*. Edward Elgar Publishing Limited, Cheltenham, UK.

Helliwell, J. F. (2002). *Globalization and Well-being*. UBC Press, Vancouver.

Henri, J. F. (2006a). Organizational culture and performance measurement systems. *Accounting, Organizations and Society* 31(1), 77-103.

Henri, J. F. (2006b). Management control systems and strategy: A resource-based perspective. *Accounting, Organizations and Society* 31(6), 529-558.

Hopwood, A. G. (1972). An empirical study of the role of accounting data in performance evaluation. *Journal of Accounting Research,* 156-182.

Johanson, J., and J. E. Vahlne. (2009). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. *Journal of International Business Studies* 40(9), 1411-1431.

Kadushin, C. (2012). *Understanding social networks: Theories, concepts, and findings*. Oxford University Press.

Koufteros, X., A. J. Verghese, and L. Lucianetti. (2014). The effect of performance measurement systems on firm performance: A cross-sectional and a longitudinal study. *Journal of Operations Management* 32(6), 313-336.

Langfield-Smith, K. (1997). Management Control Systems and Strategy: a critical review. *Accounting, Organizations and Society* 22(2), 207-232.

Luo, Y. (2005). Toward cooperation within multinational enterprise: a perspective from foreign subsidiaries. *Journal of World Business* 40(1), 71-90.

Mahlendorf, M. D., J. Rehring, U. Schäffer, and E. Wyszomirski. (2012). Influencing foreign subsidiaries decisions through headquarters performance measurement systems. *Management Decision* 50(4), 688-717.

Maley, J. F. and Moeller, M. (2014). Global performance management systems: The role of trust as perceived by country managers. *Journal of Business Research* 67(1), 2803-2810.

Martinez, J. L. and J. C. Jarillo. (1989). The Evolution of Research on Coordination Mechanisms in Multinational Corporations. *Journal of International Business Studies* 20(3), 489-514.

McEvily, B., and A. Zaheer. (1999). Bridging ties: A source of firm heterogeneity in competitive capabilities. *Strategic Management Journal* 1133-1156.

Micheli, P., M. Mura, and M. Agliati. (2011). Exploring the roles of performance measurement systems in strategy implementation: The case of a highly diversified group of firms. *International Journal of Operations and Production Management* 31(10), 1115-1139.

Nørreklit, H., and Schoenfeld, H.W. (2000). Controlling multinational companies: an attempt to analyze some unresolved issues. *International Journal of Accounting* 35(3): 415–430.

O'Donnell, S. (2000). Managing foreign subsidiaries: agents of headquarters, or an interdependent network? *Strategic Management Journal* 21(6), 525–548.

Polyani, K. (1957). The Grate Transformation. Boston: Beacon Press.

Quattrone, P., and T. Hopper. (2005). A 'time–space odyssey': management control systems in two multinational organisations. *Accounting, Organizations and Society* 30(7), 735-764.

Roth, K., and T. Kostova. (2003). The use of the multinational corporation as a research context. *Journal of Management* 29(6), 883-902.

Schäffer, U., M. D. Mahlendorf, and J. Rehring. (2014). Does the interactive use of headquarters performance measurement systems in foreign subsidiaries endanger the potential to profit from local relationships? *Australian Accounting Review* 24(1), 21-38.

Schlunze, R. D. (2004). Managerial Embeddedness of European Manufacturing Firms in Japan. *Jimbun-Chiri* 56(5), 64-82.

Simons, R. (1995). *Levers of Control: How Managers Use Innovative Control Systems to Drive Strategic Renewal*. Harvard Business School Pres, Boston, MA.

Simons, R. (2000). *Performance measurement and control systems for implementing strategy*. Prentice Hall.

Tuomela, T. S. (2005). The interplay of different levers of control: A case study of introducing a new performance measurement system. *Management Accounting Research* 16(3), 293-320.

Venaik, S., Midgley, D. F. and Devinney, T. M. (2005). Dual Paths to Performance: The Impact of Global Pressures on MNC Subsidiaries Conduct and Performance. *Journal of International Business Studies* 36(6), 655–75.

Widener, S.K. (2007). An empirical analysis of the levers of control framework. *Accounting, Organizations and Society* 32(7-8), 757-788.