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Headquarters value added and subsidiary performance: insights from Thailand

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Abstract

Purpose – The purpose of this paper is to understand the impact of network relationship strength and subsidiary initiatives on the headquarters value added and performance in foreign-owned subsidiaries.

Design/methodology/approach – This study is based on survey data collected from foreign-owned subsidiaries located in Thailand. The authors use symmetric structured equation modelling partial least squared (SEM-PLS) and asymmetric fuzzy set qualitative comparative analysis (fsQCA) techniques to analyse the data.

Findings – The authors found that intra-organisational relationship strength is one of the key determinants for high headquarter value added. They also found that headquarter value added plays a crucial role in explaining subsidiary performance. The role of subsidiary initiatives seem overall less pronounced than initially thought.

Originality/value – The originality of this study lies in the conceptual framework based on networks and subsidiary initiatives. This is one of the few studies that empirically tests headquarters value-added determinants in subsidiaries located in an emerging market. Furthermore, the authors use SEM-PLS and fsQCA to look beyond more commonly tested symmetric associations.

Keywords Networks, Emerging markets, Performance, fsQCA, Thailand, Foreign-owned subsidiaries, Subsidiary initiative, Headquarter value added

Paper type Research paper

1. Introduction

The question of how much value is actually added by headquarters to subsidiaries in multinational enterprises (MNEs) is a topic that very recently has attracted renewed attention from international business scholars (Ciabuschi *et al.*, 2017; Nell and Ambos, 2013). This shift in attention has been caused by the observed trend of multinationals to finely slice their value adding activities and to manage them through a globally dispersed network of subsidiaries (Kano, 2017; Kostova *et al.*, 2016; Rugman and Verbeke, 2001). In the early literatures, foreign-owned subsidiaries were seen predominately as mere agents of the headquarters (Caves, 1971; Cavanagh *et al.*, 2017; O'Donnell, 2000). This stream left no doubt about the importance of headquarters for subsidiaries, as the latter were at the receiving end of firm-specific advantage transfers. However, this model has been called into question by at least two developments in the modern MNE. The first is the increasing importance of external networks and the idea of seeing the MNE as a "federative institution" (Andersson *et al.*, 2007). That perspective implies that subsidiaries often generate competitive advantages via the combination of their MNE and subsidiary specific advantages and the knowledge embedded in local networks (Andersson *et al.*, 2007; Birkinshaw and Hood, 1998;

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Ghoshal and Bartlett, 1990; Liu *et al.*, 2017). The second is the importance of subsidiary initiatives (Ambos *et al.*, 2010; Birkinshaw *et al.*, 1998). According to that perspective, subsidiaries can have a significant impact on their own development and even create resource dependencies which challenge the power constellation within the MNE network (Schotter and Beamish, 2011; ul Haq *et al.*, 2017).

This is not to say that headquarters have been reduced to merely another knot in the overall MNE network structure, they still have an imminent status within the network, but current developments have raised the question of how headquarters add value to their subsidiaries (Ciabuschi *et al.*, 2012). Behind this so called "parental advantage logic" is the assumption that headquarters can actively influence the performance of subsidiaries. This task headquarters perform while not having complete information about all the activities inside and around the subsidiary (Ciabuschi *et al.*, 2011b). That means that headquarters through their intervention can even destroy value in the subsidiary because they might be ignorant of what is going on in the subsidiary and the implications of their interventions (Foss *et al.*, 2012). The question this research intends to shed further ligsht on is under which circumstances the headquarters add more value to the subsidiary. In particular, we aim to understand the effects on headquarter value added through network and subsidiary initiative perspectives.

The network perspective plays a dominant role in the headquarters value-added literature (Nell and Ambos, 2013). For instance, Andersson *et al.* (2007) focussed on external networks and found that headquarters can positively contribute to subsidiary development if the headquarters are actively involved in the inter-organisational networks of the subsidiary. This involvement reduces the risk of headquarters attempting a hazardous intervention (Foss *et al.*, 2012). On the other hand, Ciabuschi *et al.* (2011a) focussed on internal networks and pointed out that headquarters themselves can have a dominant influence on subsidiary innovation performance. While those and adjacent studies (Beugelsdijk *et al.*, 2017) focus predominantly on one side of the network perspective, few investigate the combined impact of inter- and intra-organisational relationships on headquarters value added (Forsgren *et al.*, 2005). Additionally, we believe that subsidiary initiatives play a role as well. This potential contradiction between subsidiary initiatives and headquarters value added has so far received very little attention (Schotter and Beamish, 2011). A notable exception is Ambos *et al.* (2010), for instance, who showed that initiatives can increase headquarters attention and under certain circumstances leading to privileged access to corporate resources for the subsidiary. However, their study and the adjacent studies (Mudambi *et al.*, 2014; Najafi-Tavani *et al.*, 2014) do not explicitly address in what way headquarters value added is affected by subsidiary initiatives.

The gaps this research is therefore trying to address are as follows: First, on the theoretical level, we are suggesting an inclusive conceptual framework that takes account of networks as well as subsidiary initiative considerations to improve our understanding of headquarters value added and its impact on subsidiary performance. In particular, in order to provide a more complete picture of subsidiary initiatives we follow Strutzenberger and Ambos (2014), and suggest a combined entrepreneurial and decision-making autonomy construct to capture subsidiary initiatives in the most comprehensive way. We also include intra- and inter-organisational networks (Gammelgaard *et al.*, 2012) in order to gain an understanding of how the strength of each impacts headquarters value added. Second, while previous studies have investigated those factors in a symmetric way, we believe that the complexity of the problem justifies an asymmetric methodological contribution (Fiss, 2007; Woodside, 2013). In particular, the implicit common theme in the literature seems to be that there are combinations of network and initiative conditions that might lead to increased

headquarter value added as well as subsidiary performance (Ciabuschi *et al.*, 2012). However, those have so far not been investigated in a systematic manner. While Ciabuschi *et al.* (2012, p. 213) in their conceptual article refer explicitly to the "issue of environmental complexity and the knowledge situation of headquarters", they do not follow up in subsequent work with appropriate empirical methods to actually shed light on that complexity. For instance, in Ciabuschi *et al.* (2017) still prevails only the asymmetric approach (structured equation modelling) in their data analysis, which assumes independence of the variables (Dahms, 2017c; Misangyi and Acharya, 2014). This however, does not allow for identification of complex bundles of conditions which can equally lead to the same outcome. We therefore apply "symmetric" structured equation modelling (SEM) as well as "asymmetric" fuzzy set qualitative comparative analysis (fsQCA) techniques. Thirdly, we empirically test our framework on a sample of foreign-owned subsidiaries located in the emerging economy of Thailand. We thereby acknowledge the lack of understanding of those markets in the light of their increasing importance for MNEs worldwide and their strategic implications (Wright *et al.*, 2005). In particular, Welter (2011) for instance emphasises that the context matters in which entrepreneurial activities take place. This is an important consideration for our subsidiary initiative dimension. Furthermore, Thailand is an interesting context because of its long tradition in attracting foreign direct investment (FDI) (US Department of State, 2015), its attractiveness as a location in the heart of ASEAN (AT Kearney, 2017), and its prevailing entrepreneurial culture (Dahms and Kingkaew, 2016; Dana, 2014). For instance, Dana (2014) argues that the prevailing Thai Buddhist culture provides ideal ground for entrepreneurial activities because of its tolerance for failure.

The remainder of this paper is structured as follows. In Section 2, we discuss the relevant literature and develop our hypotheses. In Section 3, we outline the research methods, which are followed by the analysis and the results in Section 4. Section 5 provides a discussion of our findings, conclusions, limitations and avenues for further research.

2. Literature review and framework development

2.1 The parenting advantage and headquarters value added

The idea of parenting advantage was brought into the international business literature from the multibusiness firm strategy literature (Campbell *et al.*, 1995; Goold *et al.*, 1998). Within that stream is the main question to what extent corporate headquarters can add value in multibusiness firms. For instance, how can a corporate headquarter add value if it simultaneously presides over diverse business divisions ranging from passenger trains to nuclear power plants? This difficulty faced by corporate headquarters is even more pronounced when the multibusiness units are dispersed over a geographic space that crosses multiple country borders (Beugelsdijk *et al.*, 2017; Menz *et al.*, 2015). The core issue, however, remains the same that is headquarters need to be in the position to add value to their foreign subsidiaries by actively engaging in "parenting" of their subordinated units. This can be achieved, for instance, by providing communication and network linkages throughout the MNE, by providing centralised cost-efficient services, such as enterprise resource planning systems, or by providing a global brand profile. In other words, headquarters are responsible to "obtain higher value than the simple sum of each organisational unit" (Ciabuschi *et al.*, 2017, p. 48). This is commonly referred to as the parenting advantage logic (Campbell *et al.*, 1995; Ciabuschi *et al.*, 2012; Nell and Ambos, 2013). The key problem headquarters face is that they are not fully informed about the internal and external situation of the subsidiary (Ciabuschi *et al.*, 2011b).

The circumstances in which headquarters might add value to their subsidiaries have so far been mostly investigated from a networking perspective. We will therefore develop our framework accordingly from this perspective firstly. We extent that literature in arguing that intra- as well as inter-organisational relationship strength matter for headquarter value added. In the second part, we investigate how the parenting advantage is affected by the somewhat hitherto neglected perspective of subsidiary initiatives. The third part will outline the implications of headquarter value added for subsidiary performance in general. The last part of our framework discusses how networks and initiative combinations can simultaneously lead to headquarter value added and increased subsidiary performance in our equifinality hypotheses.

2.2 Subsidiary networks and headquarters value added

A foreign-owned subsidiary's network is commonly distinguished between intra- and inter-organisational network relationships. Intra-organisational relationships consist of, for instance, buyers, suppliers, headquarters or research and development centres within the MNE (Gammelgaard *et al.*, 2012; Ghoshal and Bartlett, 1990; Liu *et al.*, 2017). In our context, strong intra-organisational relationships are likely to also affect the headquarters value added. For instance, Forsgren *et al.* (2005) found that stronger integration in the MNE network increases a subsidiary's visibility and standing within the MNE network. This might increase the familiarity of the headquarters with the subsidiary and reduces the likelihood of headquarters to engage in hazardous interventions (Foss *et al.*, 2012; Ma *et al.*, 2016). This, however, is not uniformly accepted. For instance, Ciabuschi *et al.* (2011a) found that the impact from the intra-organisational network on innovation performance in their study was not significant. Nevertheless, we believe that this might not hold for subsidiaries located in emerging economies. This is because headquarters might themselves try to leverage knowledge from other units of the MNE network to inform their decisions concerning subsidiaries located in such locations (Meyer and Peng, 2016). In other words, strong intra-organisational network relationships are likely to reduce the potential of the headquarters to negatively interfere with a subsidiary located in an emerging economy.

Inter-organisational networks consist of links to local business and non-business entities (Chong *et al.*, 2017; Gammelgaard *et al.*, 2012; Ghoshal and Bartlett, 1990). Those are also the networks with which headquarters struggle most to add value. For instance, Andersson *et al.* (2007) showed that only if the headquarter involves itself with the external network of the subsidiary, it is possible to subsequently positively influence subsidiary development. However, the development of strong inter-organisational relationships of subsidiaries located in emerging economies is still rather the exception than the rule (Dahms, 2017a). Strong local relationships are often limited to linkages with other MNEs in the host country. Therefore, such relationships might positively affect the headquarters value added because the headquarters might be already familiar with those actors from encounters in other host countries (Santangelo, 2009). Furthermore, Vahlne *et al.* (2012) state that because gaining local network access is a big challenge for subsidiaries, headquarters might be able to reduce such difficulties with their corporate resources. Hence, our first set of hypotheses is as follows:

H1a. Intra-organisational network relationships are positively associated with headquarters value added.

H1b. Inter-organisational network relationships are positively associated with headquarters value added.

2.3 Subsidiary initiatives and headquarters value added

We distinguish between two concepts that combined represent subsidiary initiatives. Those are the entrepreneurial orientation of the subsidiary and its decision-making autonomy (Birkinshaw, 2000; Strutzenberger and Ambos, 2014).

Decision-making autonomy is commonly referred to as the degree to which a subsidiary manager can make decisions independently of the headquarters (Cavanagh *et al.*, 2017; Gammelgaard *et al.*, 2012; O'Donnell, 2000). In our case, we see autonomy as an indicator for headquarter involvement in subsidiary development (Alharbi *et al.*, 2016; Ciabuschi *et al.*, 2012). The greater the headquarters continued involvement in the subsidiary decision making process, the lower is the risk for headquarter to make hazardous decisions. That implies the headquarters can identify more opportunities to create value for the subsidiary and subsequently for the whole of the MNE.

The second dimension is the entrepreneurial orientation of subsidiaries, which is as a concept still somewhat in its infancy (Dimitratos *et al.*, 2014). Verbeke *et al.* (2007), for instance, argue that subsidiaries can through entrepreneurial activities such as renewal (i.e. initiatives that affect existing businesses) and venturing (i.e. creating new businesses) affect their development. In line with those arguments, Birkinshaw *et al.* (1998) and Ambos *et al.* (2010) found that subsidiary initiatives increase subsidiary competences as well as access to corporate resources. It is here that we believe it positively affects the headquarters value added. Given that managers of subsidiaries will largely channel their efforts towards the good of the subsidiary as well as the MNE (Verbeke and Greidanus, 2009), we argue here that subsidiaries with a stronger entrepreneurial orientation are adopting a pro-active attitude towards headquarter involvement and are therefore more likely to gain advantages from it.

However, it should also be noted that subsidiary initiatives are neither *per se* positive for the subsidiary nor the MNE as a whole (Schotter and Beamish, 2011; Conroy and Collings, 2016). Birkinshaw and Ridderstråle (1999) show that the corporate immune system can reject subsidiary initiatives, whereas Schotter and Beamish (2011) show that the opposite can also take place in MNEs. We nevertheless believe that subsidiaries with an entrepreneurial attitude towards headquarter activities, and a higher overall involvement of headquarters in decision-making, gain more from headquarter value-adding activities. We therefore test the following hypotheses:

H2a. Entrepreneurial orientation is positively associated with headquarters value added.

H2b. Decision-making autonomy is negatively associated with headquarters value added.

2.4 Headquarters value added and subsidiary performance

The determinants of subsidiary performance have been investigated in multiple studies in the wider international business literature (Dahms, 2017a; Gammelgaard *et al.*, 2012). However, the explicit association between headquarters value added and subsidiary performance has so far not been empirically addressed. The majority of studies has so far focussed on the impact of separate incidents of headquarter involvement on performance. For instance, Ciabuschi *et al.* (2011a) show that headquarter involvement can, under certain circumstances, have a positive effect on the innovation performance of subsidiaries. Based on the same study, Ciabuschi *et al.* (2017) showed that headquarters involvement might do more harm than good for certain aspects of the innovation process.

Nevertheless, we believe that there are good reasons for headquarter value added to have an impact on subsidiary performance. This is especially so for subsidiaries located in emerging economies. For instance, emerging economies might offer only a limited number of

actors that can help the subsidiary to perform better. It might well be that the closest competitors and benchmarks for high performance are subsidiaries from other MNEs. Additionally, developing local linkages is a challenge without corporate resources (Vahlne *et al.*, 2012). We therefore believe that, although the headquarters increase risk of making hazardous involvement decisions in foreign markets (Foss *et al.*, 2012), in emerging markets the headquarter value added is showing a positive association with subsidiary performance. In other words, subsidiaries located in emerging markets might still have much to gain from headquarter involvement. For instance, the transfer of management process, the prestige that comes with increased headquarter involvement in peripheral locations, the still dominant focus on low value-adding activities, all of these affect subsidiaries located in emerging market much more than those in advanced economies. We therefore test the following hypothesis:

H3. There is a positive association between headquarters value added and subsidiary performance.

2.5 Equifinality hypothesis

Our last arguments address the issue of equifinality. Fiss (2007) argued that firms' performance is very often derived from the interplay of a complex set of conditions. Meaning that there is likely more than one way to reach the same desirable outcome. In our case, we believe that the symmetric hypotheses brought forward so far can be meaningfully extended by incorporating asymmetric considerations. Hence, we want to go beyond the mere inclusion of interaction terms (Woodside, 2013) and investigate the causality behind the concepts we have discussed so far. For instance, while we argued that initiative and network dimensions affect the headquarter value added, we also believe that there might be a combination of factors that can cause a positive parenting influence. One could for instance argue that the entrepreneurial orientation of the subsidiary only positively affect headquarters value added when combined with strong intra-organisational relationships. That could be because for subsidiaries with strong inter-organisational relationships, their entrepreneurial efforts might be more likely misdirected, maybe away from corporate interest (Birkinshaw and Ridderstråle, 1999), and also harder for the headquarters to comprehend. Such a constellation might increase the risk of hazardous intervention and therefore decrease the headquarters value added (Foss *et al.*, 2012). In a similar line of argument, one could argue the case that there are combinations of headquarter value added, initiatives and networks that cause superior subsidiary performance. The latter is of particular interest given the scarcity of empirical studies that investigate such a link as well as the inconclusiveness of the results from existing studies (Ciabuschi *et al.*, 2011a, 2017). Those considerations lead to the last set of hypotheses:

H4a. Different combinations of networks and initiative conditions can lead to superior headquarter value added.

H4b. Differing combinations of networks, initiative and headquarter value added conditions can lead to superior subsidiary performance.

3. Methods

3.1 Sampling

We established our sample universe based on the Department of Business Development database from the Ministry of Commerce in Thailand. Registration in that database is

compulsory for businesses and it therefore provides an appropriate foundation for data collection (Chitcharoen *et al.*, 2013; Sebora *et al.*, 2009). Thailand provides an interesting context to carry out our research for the following reasons. First, albeit being an emerging economy, Thailand has a long tradition of attracting FDI from East and West (US Department of State, 2015). Second, it is also one of the most attractive FDI destinations in Southeast Asia (AT Kearney, 2017). Finally, previous studies often focus on subsidiaries located in advanced economies (Nell and Ambos, 2013), which leaves the question open as to what extent the concepts developed in advanced economies also hold in different contexts. We included manufacturing and service sector companies to more accurately represent the economic activity in the country (Cao *et al.*, 2017). For instance, over recent years, the FDI in service sectors has increased globally as well as into the Thai economy (AT Kearney, 2017).

The data have been collected in 2017 by a research team situated at a prominent university in Thailand. The data collection procedure followed the Dillman's tailored design method (TDM) (Dillman, 2000) and the world enterprise survey design as conducted by the World Bank in numerous emerging economies (World Bank, 2011). For instance, in line with TDM, the survey instrument underwent a pilot test in panel sessions with academics and practitioners before the data collection process. We also used established constructs to increase comparability as suggested by TDM. TDM also suggests to personalise the survey and to coordinate contacts. Accordingly, the managing directors have been contacted directly via letter and phone, and then the questionnaire has been sent out via email and online survey, or the data were collected directly in a separate phone call. Direct and personal contact is important for research in emerging economies to develop trust and subsequently increase the response rate.

The database contains around 20,000 registered business. Out of those we contacted, around 2,000 foreign-owned subsidiaries with more than 50 per cent foreign ownership, out of which 492 we were unable to contact. After several weeks of data collection, we received 102 usable responses, which represent a net response rate of around 7 per cent. This is in line with similar studies in the field (e.g. Chidlow *et al.*, 2015; Nell and Ambos, 2013). The majority of subsidiaries have their headquarters located in Japan or the USA. In total, we have subsidiaries from 15 different home countries. Further descriptive statistics can be found in Table I.

3.2 Measures

To increase reliability and comparability of our study, we have based our constructs on well-established previous studies (Chidlow *et al.*, 2015). Our key construct of headquarter

Table I. Sample characteristics

Size (no. of employees)			Years in foreign ownership		
Employees	Freq.	(%)	Years in FO	Freq.	(%)
<50	33	33	<5 years	25	28
51-120	29	28	6-12 years	29	28
>121	40	41	>13 years	44	44
Total	*102*	*100*	*Total*	*102*	*100*
	Entry mode			Industry	
	Freq.	(%)		Freq.	(%)
Greenfield	69	67	Manufacturing	87	85
Acquisition	14	14	Service	15	15
Joint venture	19	19	*Total*	*102*	*100*
Total	*102*	*100*			

value added (HQVA) has been adapted from Nell and Ambos (2013). The respondents have been asked to what extent they would agree to three different statements. The statements are provided in detail in Table II. Compared to the original construct used by Nell and Ambos (2013), we changed the Likert scale from 1 to 5 into 1 to 7, to provide the managers with a wider scale, as suggested for studies that are likely to encounter respondents from different cultural backgrounds (Harzing *et al.*, 2009). The scale from 1 to 7 has been kept consistent for all the subjective constructs in the questionnaire.

Subsidiary performance has been measured along the commonly used dimensions of market share, profitability and sales growth. The construct has been adapted from Gammelgaard *et al.* (2012). The use of subjective performance measures was preferred in our study for three main reasons. First, subsidiary performance based on accounting measures might likely be distorted due to MNE transfer pricing techniques. Second, subjective performance measures are more likely to be answered compared to detailed accounting data (Chidlow *et al.*, 2015). Third, subjective and objective assessments have been shown to be closely related with each other (Venkatraman and Ramanujam, 1986).

The study by Gammelgaard *et al.* (2012) also provided the basis for our network strength constructs. Respondents have been asked to evaluate the strength of their inter- and intra-organisational relationships along five dimensions for each. Subsidiary initiatives have been assessed by two different constructs. The first was the entrepreneurial orientation, which focussed on the three dimensions of searching for new business opportunities, initiating new ventures and entering new markets, which have been adapted from Phene and Almeida (2008) and Dahms (2017b). Decision-making autonomy was based on six dimensions adapted from Gammelgaard *et al.* (2012).

3.2.1 Control variables. We also controlled for a number of factors which have been shown in previous studies to affect subsidiary development. First, the size of the establishment has been controlled for by the number of employees. This is because larger subsidiaries might attract more attention from headquarters because of the size of their operations (Ambos *et al.*, 2010). We also distinguished between service and manufacturing industry, as service sector internationalisation tends to be more localised in nature (Rugman and Verbeke, 2008). The home region was distinguished in Asia and others. Home region can affect subsidiary development in that such companies are often more familiar with cultural and institutional particularities (Rugman and Verbeke, 2004). We also controlled for experience curve effects by including the age of the subsidiary. That is because the longer the subsidiary and the multinational operate in a host country, the greater the likelihood that potential liability of foreignness effects diminish (Mudambi *et al.*, 2014). Finally, subsidiary competences have been measured along Porter's value chain activities reaching from sales to R&D, in a total of seven dimensions as found in Birkinshaw *et al.* (1998). This is because competencies in subsidiaries can create resource dependencies and accordingly influence the overall importance of the subsidiary within the MNE network (Dahms, 2015, 2018).

3.2.2 Common method bias. We undertook a number of steps to reduce potential common method bias. *Ex ante*, we arbitrarily distributed our constructs across the questionnaire, which makes it harder for the respondents to guess our model. This is further underpinned by the use of complex analytical methods used in this study. We also ensured confidentiality of the responses to the managers. *Ex post*, in line with Gammelgaard *et al.* (2012), we also conducted a Harman's one-factor test, which resulted in a total variance explained of well below the threshold of 50 per cent for the largest single factor (Podsakoff and Organ, 1986). Furthermore, the variance inflation factors are all below commonly applied threshold of 5 (Hair *et al.*, 2012). Hence, common method bias is not deemed a severe threat to the interpretation of our results.

Constructs	Convergent validity	Composite reliability	Cronb. Alpha	AVE
Headquarters value added				
To what extent do you agree with the following statements (1 = Fully disagree; 7 = Fully agree)?				
Your parent's way of challenging your subsidiary's strategies and tactics has improved your local performance	0.811	0.842	0.744	0.582
Activities managed by your parent have relieved your local management from administrative work	0.901			
Your parent's activities have led to substantial cost savings at your subsidiary	0.880			
Without your parent, your subsidiary would receive less information that is important to your business	0.824			
Network strength				
Indicate the strength of relationships you have with each of the following actors (please note: Local stands for businesses and other organisations in Thailand).(1 = very weak; 7 = very strong)				
Inter-organisational				
Local customers	0.765	0.840	0.762	0.515
Local suppliers	0.795			
Local competitors	0.693			
Governmental institutions in Thailand	0.861			
Science centres, Universities in Thailand	0.844			
Intra-organisational				
Buyers within your corporation	0.808	0.821	0.724	0.489
Suppliers within your corporation	0.826			
R&D and innovation centres	0.702			
Headquarters	0.773			
Other units within the corporation	0.767			
Subsidiary autonomy				
Please indicate where the strategic (i.e. policy) decisions are made for the following areas(1 = Exclusively by headquarters; 7 = Exclusively by the subsidiary)				
Market area supplied	0.920	0.880	0.835	0.550
Product/service range	0.968			
Research & development	0.993			
Producing goods/services	0.951			
Financial control	0.965			
Human resource management	0.935			
Entrepreneurial orientation				
Assess the following entrepreneurial activities with regard to their importance within your subsidiaries overall set of tasks (1 = not important; 7 = very important)				
Searching for new business opportunities	0.949	0.923	0.874	0.800
Initiating new ventures	0.925			
Entering new markets (geographic and/or product)	0.933			
Subsidiary performance				
Relative to your competitors in your industry, how would you rate your subsidiary's performance on each of the following over the last 5 years (1 = Fully disagree; 7 = Fully agree)?				
Our profitability has been much better than our competitors	0.922	0.911	0.853	0.773
Our sales growth has been higher than our competitors	0.929			
Our market share has been much higher than our competitors	0.946			

Table II.
The measurement model

4. Analysis and results

We use structural equation modelling – partial least squared (SEM-PLS) for our symmetric hypotheses and fsQCA technique for the asymmetric hypotheses. We used WarpPLS 5.0 software for SEM-PLS and fs/QCA 2.5 software for the fsQCA.

4.1 Structural equation modelling – partial least squared

In the measurement model, we assessed the reliability and validity of the constructs. The factor loadings of each set of latent variables, as shown in Table II, range from 0.693 to 0.993. The composite reliabilities and Cronbach's alphas are above the 0.7 threshold. Hence, our model is deemed to show sufficient convergent validity (Fornell and Larcker, 1981; Nunnally, 1978).

Acceptable discriminant validity is indicated by a square root of the average variance extracted that is higher than the bivariate correlations between the latent variables (Fornell and Larcker, 1981). The values in Table III support this for our data. In addition to this, the variance inflation factors are well below the threshold of 5 (Hair *et al.*, 2012) and the bivariate correlations are below the 0.8 threshold (Neter *et al.*, 1985), both of which indicates that multicollinearity is not a major issue for this study.

The results of the structural model are presented in Table IV. Given the sample size, a stable method has been used to establish statistical significance of the paths (Kock, 2011). A stable method is different from simple bootstrapping in that it does not rely on the replication of samples alone and produces more stable path coefficients (Kock, 2014). The *R*-squared for headquarter value added was 0.23 and subsidiary performance was 0.15. All our hypotheses have been supported by the results. However, the associations between

Variables	Mean	SD	1	2	3	4	5	6
1. Headquarters value added	4.44	0.98	*0.763*					
2. Intra-organisational	4.99	0.85	0.363**	*0.699*				
3. Inter-organisational	4.41	0.99	0.274**	0.572**	*0.717*			
4. Entrepreneurial orientation	5.31	1.30	0.225*	0.182	*0.174*	*0.895*		
5. Subsidiary autonomy	3.57	1.42	−0.105	0.103	0.199*	*−0.019*	*0.742*	
6. Performance	4.58	1.14	0.184	0.144	0.212*	0.186	*0.059*	*0.879*

Notes: Diagonals in Italic are the square roots of the average variance extracted and off-diagonal are the bivariate correlations between the constructs; **Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

Table III. Discriminant validity and descriptive statistics

Hypothesis/association	Path coefficient	*P*-value	Hypothesis supported
H1: Subsidiary network strength and headquarter value added			
Intra-organisational	0.235	0.006	Yes
Inter-organisational	0.129	0.089	Yes
H2: Subsidiary initiative and headquarter value added			
Entrepreneurial orientation	0.23	0.008	Yes
Subsidiary autonomy	−0.124	0.099	Yes
H3: Headquarter value added and performance	0.392	<0.001	Yes

Table IV. PLS-results

inter-organisational relationship strength and headquarter value added, as well as subsidiary decision-making autonomy and headquarter value added were with p-values significance of just below 10 per cent rather weak.

The overall model results are well within the range of generally accepted benchmarks for model fit (Kock, 2011). For instance, the inclusive goodness-of-fit measure, an indicator for overall model fit, is with 0.345 between medium and large (Wetzels *et al.*, 2009). Q-squared values of the predicted variables reach from 0.152 to 0.237, which indicates good predictive validity of the model (Kock, 2014). Complete model statistics are available from the author on request.

It is further noteworthy that from the control variables only subsidiary size was statistically significant. It showed a negative association with headquarter value added. However, the inclusion of the control variables did not alter the associations of the core model and the results are therefore not reported here.

4.2 fsQCA

We now turn to fsQCA, a method we use to test for our equifinality *H4a* and *H4b*. fsQCA is based on Boolean algebra and is hence using a set theoretic approach. Accordingly, to establish set membership, the variables need to be calibrated. In other words, a variable needs to be transformed into a condition. Each condition represents a value that indicates whether a condition is present in a certain outcome (Ragin, 2008; Schneider and Wagemann, 2010).

The calibration of the data into fuzzy sets means to distinguish cases that are either fully in, fully out or in between of certain sets. We follow the two-step method suggested by Jackson and Ni (2013) to calibrate the conditions. This method is helpful especially when recently developed constructs are being investigated for which we lack conclusive theoretical reasons that could inform our calibration cut off points. In particular, we use the z-scores from the previous SEM-PLS analysis as benchmarks for cut-off points. The method allows for a more objective calibration and is at the same time nevertheless consistent with the requirements of the individual data set. We chose a z-score of 1 as being fully in, −1 of being fully out and 0 as 0.5 cut-off point. For example in terms of subsidiary performance, the perspective taken here is that if a firm shows the expected performance, i.e. a z-score of 0, it is considered as neither in nor out of a set. This is because the goal of this analysis is to identify high performance subsidiaries.

In a first step, we conducted a necessary condition analysis, which is presented in Table V. None of the conditions reaches a consistency value of >0.9 (Ragin, 2008). That implies that there is no single condition that by itself is necessary to predict high or low headquarter value added, or high or low performance.

Table VI shows the intermediate solutions from the fsQCA to identify sufficient conditions. A solid circle (●) indicates the condition is present and (⊗) indicates its absence, a blank space indicates that the condition has no influence on the outcome. Solution coverage and consistency values are well within the range of the usual thresholds (Ragin, 2008). The most interesting solutions are those with the highest raw coverage. Coverage in fsQCA can be seen as the equivalent to the "R" value in traditional regression models. In support of *H4a*, we identify a pattern of equifinality in the solutions. In particular, there are two configurations that are associated with high value added by headquarters. The first solution shows that high intra-organisational network relationship strength is conducive to high headquarter value added. The second shows that inter-organisational network strength and both initiative dimensions also lead to high headquarter value added. However, Solution 2 shows a relatively low raw coverage. Solutions 4 to 6 show the conditions for low

Conditions	Consistency	Coverage
	HQVA	
Intra-organisational	*0.721*	*0.684*
~Intra-organisational	0.478	0.500
Inter-organisational	0.702	0.647
~ Inter-organisational	0.475	0.514
Entrepreneurial orientation	0.676	0.621
~Entrepreneurial orientation	0.505	0.547
Subsidiary autonomy	0.585	0.592
~Subsidiary autonomy	0.588	0.575
	Subsidiary performance	
Intra-organisational	*0.667*	*0.634*
~Intra-organisational	0.495	0.519
Inter-organisational	0.718	0.663
~ Inter-organisational	0.449	0.487
Entrepreneurial orientation	0.687	0.632
~Entrepreneurial orientation	0.474	0.515
Subsidiary autonomy	0.538	0.545
~Subsidiary autonomy	0.621	0.609
Headquarters value added	0.646	0.648
~ Headquarters value added	0.549	0.544

Notes: The highest values are shown in italic, none was >0.9." ~" stands for "not"

Table V.
Analysis of necessary conditions

Solution / Condition	High HQVA 1	2	Low HQVA 4	5	6
Intra-organisational	●		⊗		
Inter-organisational		●			⊗
Entrepreneurial orientation		●		⊗	
Subsidiary autonomy		●		⊗	●
Consistency	0.684	0.753	0.708	0.719	0.763
Raw coverage	0.721	0.358	0.671	0.055	0.377
Unique coverage	0.400	0.037	0.227	0.369	0.037
Solution consistency	0.674			0.673	
Solution coverage	0.758			0.783	
Frequency cut-off:	2			2	
Consistency cut-off:	0.752			0.751	

Table VI.
fsQCA results headquarter value added

headquarters value added. Solution 4 thereby indicates that the absence of intra-organisational relationships is a strong indicator for low value added by headquarters.

Table VII contains the solutions of sufficient conditions to predict high and low subsidiary performance. The high raw coverage of Solutions 1 and 2 underline the importance of headquarters value added for subsidiary performance. Solution 1 suggests that strong inter-organisational relationships and headquarter value added are conducive to performance. Solution 2 shows that intra-organisational relationships and headquarter value added are conducive to high performance. Solutions 7 to 11 indicate that the absence of the conditions that are associated with high performance do not automatically account for low performance. Overall, the results indicate robust support for *H4b*.

Table VII.
fsQCA results subsidiary performance

Condition \ Solution	High performance							Low performance			
	1	2	3	4	5	6	7	8	9	10	11
Intra-organisational		●	●	⊗	●	⊗				⊗	●
Inter-organisational	●		⊗	●	●	⊗		⊗	⊗	●	⊗
Entrepreneurial orientation			⊗	●	⊗	●	⊗			⊗	
Subsidiary autonomy			⊗	●	●	⊗		⊗	●	●	●
Headquarters value added	●	●				⊗	⊗	●	⊗		
Consistency	0.764	0.736	0.758	0.789	0.763	0.786	0.735	0.810	0.826	0.769	0.819
Raw coverage	0.536	0.529	0.189	0.175	0.240	0.183	0.436	0.295	0.312	0.184	0.231
Unique coverage	0.061	0.032	0.020	0.009	0.021	0.060	0.115	0.106	0.022	0.012	0.022
Solution consistency			0.710						0.737		
Solution coverage			0.755						0.653		
Frequency cut-off			1						1		
Consistency cut-off			0.756						0.749		

In sum, our fsQCA also extends the SEM-PLS results. For instance, contrary to our SEM-PLS results, subsidiary initiatives seem to play a less pronounced role overall to predict either headquarters value added or subsidiary performance within the boundaries of our framework. In particular, in the context of headquarters value added, initiatives only seem to matter in combination with strong inter-organisational relationships. The implications will be discussed next.

5. Discussion and conclusions

This study aimed at advancing our understanding of headquarters value added in foreign-owned subsidiaries located in emerging economies. We tested our framework based on insights from network and subsidiary initiative perspectives on a sample of subsidiaries located in Thailand. Our hypotheses did overall receive statistical support, and we uncovered some interesting novel patterns.

We found support for *H1a* and *H1b* in which we suggested that strong intra- and inter-organisational relationships will positively affect headquarters value added. However, the association between inter-organisational networks and headquarter value added was rather weak, and possibly in line with Andersson *et al.* (2007), and indicates that headquarters struggle more to add value for subsidiaries that are strongly embedded in local networks. We expand their study and the adjacent studies (Beugelsdijk *et al.*, 2017; Ciabuschi *et al.*, 2011a) by including intra-and inter-organisational relationships in the empirically tested framework to highlight that apparent trade off. This is also in line with recent MNE thinking in that headquarters managerial resources are limited. This Penrose effect might be especially pronounced when dealing with the complexity of inter- and intra-organisational relationships (Vahlne and Johanson, 2017).

While we found strong support for the positive association between entrepreneurial orientation and headquarter value added (*H2a*), we only found relatively weak support for the influence of decision-making autonomy on headquarter value added (*H2b*). Nevertheless, this symmetric result suggests that subsidiaries with a stronger entrepreneurial outlook and having their headquarters involved, gain more from headquarter interventions. This finding adds to other studies in that we show that subsidiary initiative dimensions can contribute to headquarter value added in various forms in emerging markets (Ambos *et al.*, 2010). However, we also expand those findings in showing that each dimension can have a distinct

impact on headquarter value added, an insight often ignored in other studies (Ciabuschi *et al.*, 2017).

Our final symmetric *H3* argued headquarter value added positively affects subsidiary performance, which found strong support. This contributes to current literature such as Ciabuschi *et al.* (2011a), in expanding the performance boundaries that headquarter value added affects in subsidiaries. Our results indicate that headquarters involvement, or the parental advantage (Nell and Ambos, 2013), is possibly more important for performance in subsidiaries located in emerging markets than for subsidiaries located in advanced economies.

Our final set of *H4a* and *H4b*, which focussed on the equifinality of the outcomes, has also been confirmed by our results. Interestingly, the results highlight the hugely important role that intra-organisational network strength plays in high headquarter value added. This confirms suggestions by Forsgren *et al.* (2005) and Foss *et al.* (2012) that subsidiaries with such characteristics are likely to gain from the information advantage of the headquarters, as well as the increased visibility within the MNE. Another novel finding was that Solution 2 indicated that high headquarter value added is caused by strong inter-organisational networks and both subsidiary initiative dimensions. This further highlights the complexity headquarters face when intervening in subsidiary activities as suggested in Ciabuschi *et al.* (2011b) and Foss *et al.* (2012). We add to that in showing that for headquarters to add value it is not only enough to get more involved in the subsidiary operations alone (Andersson *et al.*, 2007) but also requires entrepreneurial subsidiary managers to gain from strong local inter-organisational networks. The situation is even more complex when we consider high subsidiary performance. Our results contribute to current debates in that we show that headquarters value added is more conducive to performance when combined with either strong intra- or inter-organisational network relationships. However, for subsidiary performance, both subsidiary initiative dimensions seem to matter much less than often suggested in the literature (Ambos *et al.*, 2010).

This study provides valuable insights for future theoretical and empirical development. On the theoretical plane, we show that networks as well as initiative perspectives are required to better understand the headquarters value added and subsidiary performance in the context of emerging markets. Our findings indicate that headquarters struggle with the distinct impacts that strong relationships with intra- and inter-organisational actors can have on subsidiary development. We therefore also add to the discussion on the dominance of either inter- or intra-organisational actors. For instance, while Vahlne and Johanson (2017) emphasise the complexity that arise from dealing with external actors, Hutzschenreuter and Matt (2017) suggest that the internal network might play a more decisive role, especially for subsidiaries located in emerging markets. The latter point seems to be supported in our findings as well. Furthermore, our combined subsidiary initiative dimension consisting of decision-making autonomy as well as entrepreneurial orientation further highlights the complexity of decision-making dimensions in which subsidiary managers operate. We also show that methodologically, fsQCA has lots to offer to the field because it goes beyond the symmetric associations commonly found in regression based methods and allows identifying equifinality in the outcomes (Fiss, 2007). In particular, we go beyond the symmetric findings prevalent in most studies (Ciabuschi *et al.*, 2017). That is because fsQCA allows for instance for multiple paths to lead to the same outcome. In our case, we showed that for high headquarter value added, strong intra-organisational relationships can be a substitute for the lack of subsidiary initiatives as well as weak inter-organisational relationships. Such insights are difficult to show with symmetric methods alone, which assume independence of the variables in the model.

This study also has managerial and policy implications. On the managerial plane, our results highlight the importance of internal networks for managers to gain the most from headquarter involvement. Policymakers need to be aware that for subsidiaries to develop local networks is a high cost activity (Klopf and Nell, 2018; Nell and Ambos, 2013). Nevertheless, our results indicate the host country can play an important part in the headquarter value added and subsequently in the performance of the subsidiary and the MNE itself.

This study also has limitations. For instance, this is one of the first studies to investigate headquarters value added in subsidiaries located in an emerging economy. While we largely confirmed our theoretical expectations, we believe that studies involving multiple countries could find new patterns in subsidiary development and headquarter involvement. For instance, while Thailand provides privileged access to other ASEAN member markets, it might well be that headquarter involvement takes different forms in host countries with a larger domestic homogenous market such as China.

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