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The influence of competences and institutions on the international market orientation in foreign-owned subsidiaries

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The influence of competences and institutions on the international market orientation in foreign-owned subsidiaries

Abstract

The international market orientation of foreign-owned subsidiaries, defined here as the importance of markets supplied outside their host country, can and often does, plays a vital role for managers as well as policy makers. This paper investigates how multilevel corporate competences and institutional differences stand to influence international market orientation and performance among firms. Our research is based on a survey of subsidiaries located in the mid-range, emerging economy of Taiwan. The results are analysed using SEM-PLS method. We found that competences that emerge from the subsidiary itself and competences from multinational enterprise networks serve to enhance; whereas, competences emerging from headquarters' operations can have an adverse effect on international market orientation. Institutional differences add to the overall complexity through direct and moderating effects. This study indicates that the competence-based view of the firm can be enriched with insights from institutional theory in order to expand our understanding of subsidiary development located in emerging economies and also with their international market orientation in particular.

Keywords: Foreign-owned subsidiaries; Multinational Enterprises; Emerging Economies; SEM-PLS, International Market Orientation; Institutional Theory

1. Introduction

International market orientation of foreign-owned subsidiaries is an important topic for multinational enterprises (MNEs) (Nguyen & Rugman, 2015) as well as for policy makers in export-dependent host economies (Estrin et al., 2008). By international market orientation we mean the importance of markets supplied by a given subsidiary outside the host country. For instance, the U.S. car maker Ford Motors owns a production facility in Taiwan that also supplies cars to the South Korean market, as well as locally. Host countries sometimes try to ensure a sufficient international market orientation by making the fulfilment of international market supply quotas a necessary precondition in the provision of a foreign direct investment (FDI) license (Dunning & Lundan, 2008). This is evidenced, for example, in the ever-growing incidence of export processing and special economic zones in many emerging economies (Boyenge, 2007). However, many concomitant issues remain to be solved. For instance, the indiscriminate lure and often footloose nature of such investments have led some regions to reconsider their FDI-attraction strategy (Holmes et al., 2013; Monaghan et al., 2014). On the other hand, underperforming subsidiaries have been terminated by MNEs even if they are located in fast-growing regions due to their disappointing market coverage and performance (Larsen et al., 2013). Despite the obvious importance of international market orientation for MNE strategy and host-country economic development, relatively little research has been conducted in that area (Kwon, 2010; Meyer & Estrin, 2014).

In order to contribute to an understanding of international market orientation within subsidiaries, we start with the basic premise that considers MNEs to have difficulties in transferring competences across country borders (Rugman & Verbeke, 2001; Rugman et al., 2011). By competences, we mean a relative strength based on both tangible and intangible assets that will set the MNE or the subsidiary apart from relevant competitors in the host country (Verbeke et al., 2016). In particular, we distinguish herein between three different MNE structural levels from which competences can be said to emerge. The first level is the headquarters level, whereby the subsidiary can access practical know-how embedded in similar products and services of the multinational for instance. The second level is the subsidiary level, which encompasses decision-making autonomy competences. The last is the MNE network level, which, although effected by the first two competences, is seen as a

distinguishable competence, since it entails the management of knowledge and information exchanges between the subsidiary and other units existing within the MNE network.

The difficulties for a multinational to transfer competences across country borders can be caused by institutional differences found between the home and host countries (Rugman et al., 2011). This is because MNEs develop in a specific home country's institutional setting and the resulting competences are often bound to that context (Oliver, 1997; Martin, 2014; Verbeke et al., 2016). For example, competences in marketing campaign development, which are perceived as providing superior value to customers in the home country, might not exhibit the same impact in the host market due in large-part to legally-sanctioned adaptations. In other words, the faster-than-expected diminishing returns which result on transferred competences are likely to affect the international market orientation in those subsidiaries. Hence, we combine institutional theory with a competence-based view of the firm (Brouthers et al., 2008; Peng et al., 2008; Pattnaik et al., 2015) to investigate the determinants of international market orientation, and subsequently the performance of foreign-owned subsidiaries located in a given emerging economy. In particular, to take a first step, we investigate how competences and institutional differences directly affect international market orientation, which in turn subsequently determines subsidiary performance. In a second step, we expand our argument to discuss how the interaction between competences and institutions effects perceived international market orientation.

Previous studies related to the topic have often ignored the fact that competences can arise from multiple levels of the MNE structure such as headquarters, MNE networks, or the subsidiary itself (e.g. Kwon, 2010). Others have focussed on decidedly Western contexts, but they have ignored the increasingly important emerging markets of Asia (e.g. Meyer & Estrin, 2014). Therefore, the implications of this research for the current literature are as follows. On a theoretical level, we aim to combine institutional theory and the competence-based view of the firm (Brouthers et al., 2008; Pattnaik et al., 2015). This is particularly important in the context of FDI and more specifically in the light of increasing competence transfer over to emerging economies (Peng et al., 2008; Martin, 2014; Verbeke et al., 2016). Empirically, we provide survey evidence in order to test our hypothesis based on foreign-owned subsidiaries currently operating in Taiwan.

Taiwan is a mid-range and export dependent emerging economy in Asia, and as such provides an ideal groundwork location for our research purpose (Hoskisson et al., 2013). This is true because on the one hand, Taiwanese mid-range emerging economy institutions can be seen as being unevenly developed. For instance, infrastructure is in many aspects commensurate with that of developed country standing, whereas it is commonly acknowledged that judicial efficiency may not realize similar expectations. Hence, institutional development is likely to be seen as somewhat volatile but not as volatile as observed in lesser-developed countries such as Somalia. This comparative institutional stability aspect also makes it more likely that substantial FDI may take place, and it increases the real likelihood of considerable competence transfer to occur. On the other hand, a comparatively wealthy but smaller domestic market, in direct combination with a close geographic proximity to Mainland China and Japan, makes international market orientation an attractive option.

2. Literature and hypothesis development

This section explains our theoretical framework in three relative parts. The first part outlines how the competence-based view of the firm and institutional theory can possibly explain international market orientation in foreign-owned subsidiaries. This aspect is important in order to understand not only the expected associations between multilevel MNE competences and international market orientation, but it also highlights those potential inter-relationships between those competences and the direct effects of the institutional dimensions on international market orientation. The second part outlines how institutional factors may be used to moderate baseline model associations. The third part discusses the impact international market orientation has on the course of subsidiary performance.

2.1. Multilevel MNE competences and international market orientation

Based on early literature adopting a resource-based view (Barney, 1991), multilevel MNE competences have been identified as major drivers of MNE and subsidiary competitive advantages (Rugman & Verbeke, 2001). Competences are herein seen as a relative strength based on both tangible and intangible assets that set the MNE or the

subsidiary apart from relevant competitors located in the host country (Verbeke et al., 2016). For the most part, their actual development cycle is still rather unexplored (Dimitratos et al., 2014; Kostova et al., 2016). However, what seems to be agreed upon is that such competences can be developed from within multiple levels of the MNE structure (Bartlett & Ghoshal, 1989; Verbeke et al., 2016). This research includes competence sources from three different levels of the MNE structure: In particular, autonomy competence as subsidiary level (Dimitratos et al., 2014), intra-organisational network competence as MNE network level (Kostova et al., 2016), and relatedness competence as headquarters level (Ciabuschi et al., 2012).

Autonomy competence is defined here as an entrepreneurial competence that can be seen as prerequisite for subsidiary market development to occur (Dimitratos et al., 2014; Dahms, 2015). It is the ability of subsidiary managers to make decisions across a number of value-chain activities independently of the headquarters (Birkinshaw et al., 1998). If autonomy is granted by the headquarters or self-initiated by the subsidiary, it is still an ongoing discussion (Ambos et al., 2010); however, it is still seen as conducive to the development of an international market orientation. This is because a greater sense of autonomy allows for the exploration of new market opportunities outside the host country's location (Gammelgaard et al. 2012). In other words, autonomy as a competence is a key driver for expanding existing market activities, as well as venturing beyond the prescribed geographic market boundaries (Verbeke et al., 2007).

Relatedness competence is a headquarters level competence and refers to how closely industry, and products or services of the subsidiary are relatable to those of the MNE headquarters. This is of importance because greater similarity indicates that it is easier for the subsidiary to form a link with the knowledge-based resources of the headquarters (Nguyen & Rugman, 2015). Relatedness competence implies a traditional view in which MNEs transfer and exploit home-grown, firm specific advantages across borders via their subsidiary network (Rugman & Verbeke, 2001; Ciabuschi et al., 2012). Being able to link into such a ready pool of competences, however, can also have negative consequences for the presumed international market orientation of the subsidiary. This situation is because such a linkage might lead to a predominantly inward-looking strategic focus of the subsidiary (Dahms, 2015) and to an increased resource dependency of the subsidiary upon the headquarters (Luo,

2003). Furthermore, Meyer and Estrin (2014) have argued that some MNEs see the costs for product or service localisation as prohibitively high; however, this eventuality might be unavoidable in order to expand the international market orientation of the subsidiary.

Intra-organisational network competence is an MNE network level competence, and it is defined as the degree of embeddedness of the subsidiary within other units of the MNE network. Intra-organisational networks drive knowledge accumulation from other parts of the MNE and are hence of some importance for subsidiary competence development (Kostova et al., 2016). This is because a deeply embedded subsidiary is exposed to a wider range of compatible knowledge stimuli (Venaik, et al. 2005; Andersson et al., 2016). Compatibility of knowledge is also vital to increase the power position of the subsidiary within the MNE network (Ambos et al., 2010). As such, this can positively drive the subsidiary's international market orientation; in this way, the subsidiary might identify new markets outside the host country allowing one to exploit opportunities that derive from internal network competences.

Interrelationships between competences emerging from different levels of the MNE must be considered since strong evidence exists that the competence sources do not exclusively exist in isolation of each other (Bartlett & Ghoshal, 1989; Andersson et al., 2014). This is especially the case whenever considering the MNE network competence level (Gammelgaard et al. 2012). For instance, previous studies found that greater subsidiary autonomy competence can lead to a greater isolation of the subsidiary from other parts of the MNE network (Dimitratos et al., 2014). However, more autonomy could also mean that the subsidiary will develop a stronger position within the MNE network due to a broader competence accumulation (Bouquet & Birkinshaw, 2008; Dahms, 2017a), and hence it will positively affect subsidiary corporate network integration. This could be especially the case for subsidiaries in emerging markets given the relatively steep learning curves for MNEs in such locations (Peng et al., 2008; Nguyen & Rugman, 2015). On the other hand, stronger integration into the MNE network could also be facilitated by limiting the subsidiary scale and scope of the products and services offered in the host country market (Bartlett & Ghoshal, 1989; Birkinshaw et al., 1998). That means that the relatedness competence is positively associated with intra-organisational network competence. This leads to our first set of hypotheses:

Hypothesis 1a: Autonomy competence is positively associated with international market orientation.

Hypothesis 1b: Autonomy competence is positively associated with intra-organisational network competence.

Hypothesis 2a: Relatedness competence is negatively associated with international market orientation.

Hypothesis 2b: Relatedness competence is positively associated with intra-organisational network competence.

Hypothesis 3: Intra-organisational network competence is positively associated with international market orientation.

2.2. Institutional differences in emerging markets and international market orientation

The key distinguishing features of emerging markets are their formative differences in institutional development (Peng et al., 2008; Martin, 2014). North (1990) suggests a broad distinction between formal (policy, legal, and economic rules) and informal institutions (habits, norms, and values). We apply the extended framework by Hoskisson et al. (2013) in order to develop the hypothesis for our emerging economy context. Accordingly, we distinguish three dimensions of institutional home- and host-country differences: formal institutional development, factor market and infrastructure development, and informal institutional differences. Formal institutional development reflects the ease, at which transactions can take place (Wan and Hoskisson, 2003). Factor market and infrastructure development represent the location-specific advantages and production-factor endowments (Porter, 1990). Lastly, informal institutional differences matter especially in emerging markets because of their relative weakness in the development of other institutional dimensions (Rottig, 2016).

Our institutional approach therefore also differs from several adjacent approaches. For instance, the 'institutional voids' (White et al., 2014) literature argues that MNEs fail to succeed because certain parts of their home-country's institutional settings are missing in the host country. We, however, argue the point that it is not only the institutional voids that present MNEs with difficulties in conducting business in distant locations (Rugman et al., 2011). We argue that institutional differences lead to a much broader transaction cost premium for MNEs caused, for example, by

institutional uncertainty (Slangen & Beugelsdijk, 2010), asymmetric information (Rugman et al., 2011) or liability of foreignness (Zaheer, 1995).

2.2.1. Formal institutional development

Differences in the formal institutional development between home- and host-country create additional costs for MNEs for instance through dissimilarities in export procedures and taxes, health and safety regulations, sudden policy changes, or product adaptations for regulatory compliance (Papanastassiou & Pearce, 1999; Luo 2003; Pattnaik et al., 2015). The increased costs incurred by the MNE will be likely reduced through an extension of subsidiary market responsibility, in order to achieve economies of scope and scale. Empirical evidence for this assertion has been found in the context of subsidiaries located in Central and Eastern European countries by Estrin et al. (2008) and Meyer and Estrin (2014).

Formal institutional difference is also expected to moderate the associations between multilevel MNE competences and international market orientation in the subsidiary. For instance, the incidence of larger formal institutional difference is likely to reduce autonomy competence due to an increased desire by headquarters to control activities in such subsidiaries (Slangen & Beugelsdijk, 2010). On the other hand, we would expect shallower network integration in order to minimise potential negative externalities in intra-organisational transactions (Luo, 2003). Headquarter competences might be diminishing in value due to prohibitively high costs caused for instance by legally required changes to the products and services. We therefore expect a negative formal institutional moderation effect on the associations between competences and international market orientation.

2.2.2. Factor market and infrastructure development

Differences in factor markets and infrastructure include tangible factors required for production such as skilled labour and physical infrastructure (Porter, 1990; Wan and Hoskisson, 2003). Although both examples are considered insufficient to retain or attract sustainable foreign direct investment; they are often seen as a necessary prerequisite for successful economic development to take place (Rottig, 2016).

Accordingly, many emerging economies have invested heavily in those institutional factors (Hoskisson et al., 2013). Larger differences between countries on such dimensions can increase coordination and management costs for the MNE. Such additional costs are likely to negatively affect the international market orientation of the subsidiary since management resources might be focussed entirely on the local market. This might be in particular the case for mid-range emerging economies since those also offer a sufficiently attractive local market (Nguyen & Rugman, 2015). Hence, the incentive to supply from that location to other markets might be limited.

Differences in factor markets and infrastructure are also expected to moderate the relationships between competences and international market orientation. For instance, larger factor market and infrastructure differences provide a greater opportunity for the MNE to engage in institutional arbitrage (Rugman & Verbeke, 2001). Hence, subsidiaries located in such institutional settings are likely to gain from stronger autonomy, network, and headquarter competences that offset the initial increased direct cost for extended international market orientation. In other words, we expect such institutional differences to positively moderate the association between competences and international market orientation.

2.2.3. Informal institutional differences

Larger informal institutional differences create additional costs for the MNE for instance in communication and coordination due to asymmetric information and language barriers (Gaur & Lu, 2007; Rugman et al., 2011; Lew et al., 2016). This is expected to negatively influence international market orientation. The headquarters might see the potential adaptation costs of firm specific advantages as prohibitively high (Rugman & Verbeke, 2001) and therefore reduce the market scope and scale of the subsidiary. Although larger informal institutional differences can also have positive implications for learning and development in MNEs (Meyer & Estrin, 2014), the risk of disintegration, as well as the potential lacking relevance of dissimilar knowledge from such locations looms large (Andersson et al., 2016).

Informal institutional difference is also likely to play an important role as a moderating variable in our model. We expect that the costs of transferring firm specific advantages can be minimised by decentralising control and a simultaneous deeper integration into the MNE network in informal institutionally dissimilar

locations (Gaur & Lu, 2007). Informal institutional difference is also likely to strengthen the expected negative association between relatedness competence and international market orientation given that high relatedness competence and larger difference compound the resource dependency of the subsidiary to the headquarters (Luo, 2003). Our second set of hypothesis is therefore as follows:

Hypothesis 4a: Formal institutional differences are positively associated with international market orientation.

Hypothesis 4b: Factor markets and infrastructure differences are negatively associated with international market orientation

Hypothesis 5: Informal institutional difference is negatively associated with international market orientation.

Hypothesis 6a: Formal institutional differences weaken the associations between competences and international market orientation.

Hypothesis 6b: Factor markets and infrastructure differences strengthen the associations between competences and international market orientation.

Hypothesis 7: Informal institutional difference strengthens the associations between competences and international market orientation.

2.3. International market orientation and subsidiary performance

The link between market orientation and performance has been mostly argued to be positive in domestic as well as international settings (Kwon, 2010). Relatively little is known however, on the issue in the context of foreign-owned subsidiaries in emerging economies (Meyer & Estrin, 2014). Most international business literature suggests that international market orientation supports the learning and innovation process of the subsidiary as well as the MNE as a whole (Verbeke et al., 2016). For the subsidiary in particular that means an extended international market orientation also comes with an extended market mandate and therefore increased influence within the MNE network. This, on the other hand, increases the likelihood of attracting repeat investment from the headquarters, which is positive for subsidiary performance to occur (Ambos et al., 2010).

Subsidiaries located in emerging markets might also indirectly gain from such a mandate through increased status within the host country economy. This on the other hand could help to attract and retain scarce local managerial talent (Ready et al.,

2008). Conduciveness to performance could also be local policy incentive in a sense that increased international market orientation could lead to taxation advantages for instance (Dunning & Lundan, 2008). Hence, our final hypothesis is as follows:

Hypothesis 8: International market orientation is positively related to performance.

Figure 1: Full model (Around here)

3. Research method

3.1. Research context

This research has been carried out on foreign-owned subsidiaries located in Taiwan. There are a number of reasons for that choice. First, Taiwan is considered a mid-range emerging economy, which means that it is still not part of the fully developed country circle, but its institutional development is heading towards that direction (Hoskisson et al., 2013). Second, its geographic location near the large and diverse markets of China and Japan (Lin, 2014), makes it an important hub for international trade and an interesting research ground for understanding the factors that influence the international market orientation in foreign-owned subsidiaries. Third, it also has a comparatively long history of foreign direct investment (US Department of State, 2013), which attracted investment from a wide range of different home countries that bring with them a number of different institutional backgrounds. Lastly, focusing on one host country also reduces the effects of other confounding factors.

3.2. Sampling and data collection

The sample frame is based on the Dun & Bradstreet database of foreign-owned subsidiaries in Taiwan. Dun & Bradstreet databases are well established as a sample foundation and have been used in various studies (e.g. Gammelgaard et al. 2012). The requirement for a subsidiary to be included was to have 50% or more in foreign ownership. This was deemed necessary in order to have institutional and home country effects present in the subsidiaries. Furthermore, dormant registered addresses and holdings have been excluded. This resulted in a sample frame of 776 manufacturing and service sector subsidiaries.

Survey method has been used to collect the data from the managing directors of each subsidiary. The use of surveys is justified in our research context because the detail of data we require is not obtainable from secondary data alone. The managing director has been chosen because she is most likely to have the required information (John & Weitz, 1988). The design of the survey followed Dillman's (2000) tailored design method, which has been supplemented with insights from best practise in international business surveys (Harzing et al., 2009; Chidlow et al., 2015) and Taiwan in particular (Chu-Chen et al., 2014). The survey has been pilot tested in panel sessions with academics as well as three different managers of subsidiaries in Taiwan and abroad. The feedback sessions with the managers were held at the site of their respective establishments and lasted between 20 to 30mins each. The feedback from those sessions resulted only in minor wording changes. Afterwards, the questionnaire has been forward and backward translated (Chidlow et al., 2015) by academic native Chinese speakers working in Taiwan and at a university in the United Kingdom.

After the pilot test, first contact with the subsidiaries has been established via phone calls in order to verify the name and address of the managers. Following that, a web-based survey (Chidlow et al., 2015, Lew et al., 2016) has been sent out three times in combination with phone reminders. A final fourth round included additional phone calls. For the purpose of those phone calls, a call centre had been established at the university. In line with the World Bank Enterprise Survey method (World Bank, 2011), the call centre agents received a total of nine hours training before the survey in order to understand the purpose of the research as well as phone etiquette. The managers were ensured confidentiality of their responses and a summary report of the research findings has been offered as an incentive to participate. Five questionnaires had to be discarded because of missing data and no possibility to retrieve the missing values from the responding managers. Eventually, a total of 226 usable responses have been received, which equals a favourable response rate of 29.1% (Lin, 2014). Because we focus on subsidiary competences, we excluded sites with less than 10 employees, since those are often representative offices with few competences (Bartlett & Ghoshal, 1989; Doz et al., 2001). Hence, the net sample used for the statistical analysis contained 216 subsidiaries.

Positive for our research objectives was the fact that the subsidiaries have their headquarters in 17 different home countries. The majority of MNEs are headquartered

in Japan and the USA. 88 belong to manufacturing and 128 to the service sector. 142 are Greenfield establishments, 47 joint ventures, and 27 acquisitions. The smallest subsidiary has 10 employees, up to 3900, and an average of 158 people working on site. Their parents size reach from 26 to almost 600,000 with an average of around 27,900 employees in the corporation.

3.3. Measures

In line with best practise in the field (Dillman, 2000; Chidlow et al., 2015) and to increase comparability of our findings have the survey, as well as institutional measures, been adapted from previous studies. In order to account for potential differences in the nationality of the responding managers (Harzing et al., 2009) have the question scales been changed from 5-point to a 7-point Likert scale. The detailed constructs and their sources can be found in table 1. This research also utilises secondary data sources for the institutional variables and controls, in order to reduce common method bias (Chang et al., 2010) and endogeneity (Reeb et al., 2012).

Subsidiary performance has been measured using three subjective items related to profitability, market share and sales. The use of subjective performance measures is justified as follows. Firstly, MNEs are prone to use various methods of internal pricing, which makes 'real' data such as profit likely to suffer from over or underestimation of their true value (Gammelgaard et al. 2012). Second, managers are more likely to respond to surveys in which they do not have to provide detailed accounting information that could be considered as confidential (Chidlow et al., 2015). Third, subjective measures have been shown to sufficiently correlate with their objective counterparts (Venkatraman & Ramanujam, 1986).

The constructs for *autonomy competence* contained six-items adapted from Gammelgaard et al. (2012). We added the decision making autonomy for the services range since we also included service sector firms (Dahms, 2017b). *Intra-organisational network competence* was a five-item construct from Gammelgaard et al. (2012). It covered Buyers, Suppliers, R&D Centres, Headquarters, and Other units. Buyers and sellers have been included because although such relationships are usually assigned by the head office, they can develop different strength and importance for the network actors (Yamin and Andersson, 2011). *Relatedness competence* was adopted from Nguyen and Rugman (2015) and asked about the similarity of industry

as well as the products and services produced on site. *International market orientation* asked for the importance of market regions outside of Taiwan and was adapted from Papanastassiou and Pearce (1999) and Dahms (2015). The geographic regions had been changed because we conduct our study in Asia and not in Europe.

3.3.1. Institutional differences

Institutional differences between home and host country are herein approximated along three dimensions. Those are: formal institutional development, infrastructure and factor markets development, and informal institutional differences. The first two dimensions have been identified as key institutional pillars to assess the stage of economic development for a given country (Wan & Hoskisson; 2003; Hoskisson et al., 2013). This is important for our research because Taiwan is considered a mid-range merging economy (Hoskisson et al., 2013). That means that certain institutional aspects have almost caught up with developed countries, such as corruption of government officials, but might still lag behind in other dimensions such as judiciary efficiency. Furthermore, because of the weakness of formal and factor market institutions, informal institutional play a more pronounced role in emerging economies (Rottig, 2016).

For *formal institutional differences*, we followed the theoretical arguments of North (1990) who argues that formal institutions need to be inclusive of policy, legal, and economic rules. This is also the underlying rational for the dimensions of formal institutional development, and infrastructure and factor markets development in Hoskisson et al. (2013). In particular, in the current research we used the composite value of formal institutions as derived from the World Economic Forum report (WEF, 2015). For example, the index for institutions consists of 21 individual and equally weighted items. Each item has been added up and divided by the total number of items in each index category. The measure for *Infrastructure and Factor markets* has been captured by averaging the values for Infrastructure, Macroeconomic environment, and Health and Primary Education, as given in the World Economic Forum database (WEF, 2015) and used by Hoskisson et al. (2013). The absolute value has been used as indicator for institutional differences between Taiwan and the various home countries.

The *informal institutional differences* play an exalted role in emerging economies mainly because of the lack of development of market and non-market based institutions. Measuring cultural differences has been subject to much debate in the field of international management (c.f. Shenkar, 2001; Berry et al., 2010; Zaheer et al., 2012). This research reacts to that debate in addressing two main criticisms in current literature. First, we use the GLOBE project study instead of the Hofstede (2001) study as our data source. This is because it is more current and has a more advanced research design. The GLOBE dimensions also reflect the differences between countries in terms of habits, norms, and values as suggested in North (1990). Second, instead of calculating informal institutional differences using the Kogut and Singh formula, we rely on the covariance based Mahalanobian distance calculations (Berry et al., 2010). In particular, we use a weighted and asymmetrical cultural difference index by Yeganeh (2014).

3.3.2. Controls

In line with Gammelgaard et al. (2012) and Ketkar et al. (2012), this study also controls for industry, age and relative size. In particular, *industry* has been included to differentiate between service and manufacturing sector in which the MNE operates. This information has been taken from the Dun & Bradstreet database. *Age* is the number of years the subsidiary is foreign-owned. *Size* is the number of employees at the site. *Relative size* is the number of employees at the site divided by the number of employees in the MNE (Raziq et al., 2013). The later information has been collected via the company homepages and in some cases email exchanges with the headquarters.

3.3.3. Common method and response bias

This research also took potential common method bias into consideration (Chang et al., 2010). First, we use primary and secondary data for the analysis. Second, we assured the respondents confidentiality of their answers. Third, we randomly distributed the items on the questionnaire, hence; leave the respondent no opportunity to predict the model. Lastly, we also conducted a Harman's one factor test. The factor analysis resulted in a five factor solution with the first factor only accounting for 21% of the total variance explained, which is in line with similar studies (e.g. Lew et al. 2016) and well below the maximum threshold of 50% (Podsakoff & Organ, 1986).

Response bias has been tested in two ways. Firstly, non-response bias has been tested for industry and home country, taken from the Dun & Bradstreet database for the whole sample universe. The t-test showed no difference between respondents and non- respondents. We also tested for differences between early and late respondents using Chi-square tests with industry and home country. No response bias has been detected.

4. Analysis

We analyse the data based on a partial least square (PLS) approach to structural equation modelling. A PLS approach has also been adopted in previous subsidiary development literature such as Venaik et al. (2005) or Gammelgaard et al. (2012). A PLS approach is appropriate for this study because it has lower sample size requirements compared to covariance based structural equation models (Hair et al., 2012). Venaik et al. (2005) also point out that in the academic field of international business the models and constructs are by and large still in an early development stage, which makes PLS more suitable than covariance based models such as LISREL. PLS is also less sensitive to data inadequacies than traditional ordinary-least-square regression techniques for example (Hair et al., 2012). Lastly, PLS is also able to handle multiple latent and manifest variables, as are common in research on institutional theory (Batjargal et al., 2013) and our proposed model.

Each PLS model contains two set of equations, on the one hand there is a measurement model and on the other hand the structural model. The measurement model is necessary to indicate if the subsequent structural model is feasible at all. The structural model analyses the relationships between the latent variables and the relevant manifest variables. Both will be outlined next. WarpPLS 5.0 and SPSS 18 software have been used to analyse the data (Ketkar et al., 2012; Segaro et al., 2014).

4.1. Measurement model

The measurement model is the basis for the subsequent structural model analysis (Hulland, 1999). Accordingly, the reliability and validity of the constructs has been assessed. Convergent validity ensures that the statements of the questions given to the subsidiary managers are sufficiently correlated with the expected latent variable. In a

second step, discriminant validity is being assessed as an indicator for, or lack of, correlation between the respective latent variables.

The factor loadings for the convergent validity have been obtained through an exploratory principal component analysis, and varimax rotation with Kaiser Normalization (Full details table A appendix). As shown in table 1, the composite reliability and Cronbach alpha are for all measures above the required 0.7 threshold (Hair et al., 2012). Composite reliability ranges from 0.856 for the international market orientation construct to 0.941 for performance construct. Cronbach alphas range from 0.757 for the relatedness construct to 0.911 for decision-making autonomy. One indicator from the intra-organisational network construct and one indicator from the international market orientation construct fell just below the more conservative criterion on convergent validity of 0.7. However, average variance extracted was above 0.5 and can hence be deemed satisfactory as indicator for convergent validity (Werts et al., 1974; Chin, 1998; Hair et al., 2012). As a result, the indicator has been kept in subsequent analysis and not dropped in order to keep the richness of the data. This seems also justified given the satisfactory values of composite reliability and Cronbach alpha for the construct.

The discriminant validity of the measurement model is presented in table 2. Institutional differences are single indicator measures and their value is therefore 1. The square root of the average variance extracted is higher than the correlation between the constructs. This indicates that there is sufficient discriminant validity (Fornell & Larcker, 1981). The full cross loadings are presented in table A in the appendix and show good discriminant validity. We also assessed variance inflation factors in order to assess multicollinearity between the variables. This is important given that we also include moderating variables. The values are all below the threshold of 5 (Hair et al., 2009), and so multicollinearity is not seen as a major threat to our analysis results (see table B in the appendix for details). Hence, we can argue that the results indicate that our measures are reliable and valid, we can therefore move on to the structural model (Hair et al., 2012).

Table 1: The measurement model & constructs (around here)

Table 2: Discriminant validity (around here)

4.2. Structural model

The structural model is used to test the hypothesised relationships. Given the sample size, a stable method has been used to establish statistical significance of the paths (Kock, 2011a). 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, 2014a). Following Lew et al. (2016) and Hair et al. (2013) two structural models were analysed. The first (baseline model) contains only the direct expected associations and the second model (moderated model) tests explicitly for the moderating effect of institutional difference. Table C in the appendix provides the details for each model's fit and quality indices. The results are in line with previous studies and well within the range of generally accepted benchmarks for model fit (Kock, 2011b; Ketkar et al., 2012; Segaro et al., 2014). For instance, the inclusive goodness of fit measure, an indicator for overall model fit, is with 0.366 between medium and large (Wetzels et al., 2009). Q-squared values of the predicted variables reach from 0.07 to 0.295, which indicates adequate predictive validity of the model (Kock, 2014b).

Path coefficients and P values are reported. The use of P values and confidence intervals lead to the same outcomes (Kock, 2016). Kock (2016) argues that the use of P values in PLS is advantageous because in addition to indicating the relationship strength (which is also given in the path coefficients) it also indicates the power of the test. For instance, lower path coefficient values can still be statistically significant in data sets with larger sample size.

Table 3 provides a summary of the hypothesis tested in this paper for the baseline and the moderated model. The R-squareds for intra-organisational network competence was 0.06 and for performance 0.179 in both models; international market orientation was 0.22 in the baseline and 0.29 in the moderated model.

The baseline model shows that the path coefficient between autonomy and international market orientation is positive (β=0.22) and significant (P<0.01). Hypothesis 1a is supported. The path coefficient between autonomy and intra-organisational network is positive (β=0.15) and significant (P<0.01). Hypothesis 1b is supported. The path coefficient between relatedness and international market orientation is negative (β=-0.18) and is significant (P<0.01). Hypothesis 2a is supported. The path coefficient between relatedness and intra-organisational network is positive (β=0.21) and significant (P<0.01). Hypothesis 2b is supported. The path coefficient between intra-organisational network and international market orientation is positive (β=0.18) and is significant (P<0.01). Hypothesis 3 is supported. The path coefficient between formal institutional development and international market orientation is negative (β=-0.02) and not significant (P=0.38). Hypothesis 4a is not supported. The path coefficient between factor market development and international market orientation is negative (β=-0.10) and significant (P=0.07). Hypothesis 4b is supported. The path coefficient between informal institutional difference and international market orientation is negative (β=-0.13) and significant (P=0.03) Hypothesis 5 is supported.

We next ran the model including the moderating effects. The results partially support our expectations. Overall, formal institutional development difference has no statistically significant impact on the associations between competences and international market orientation. Hence, hypothesis 6a received no support. This was different for the factor market development moderators. Larger factor market development difference positively moderates the associations between autonomy (β=0.19, P<0.01), intra-organisational network (β=0.13, P=0.02), and international market orientation. However, factor markets seem to play no role in the association between relatedness and international market orientation (β=0.03, P=0.35). Hence, we find partial support for hypothesis 6b. Informal institutional difference strengthens the associations between relatedness (β=0.11, P=0.04) and international market orientation. But remains non-significant for intra-organisational network (β=-0.03, P=0.35), and autonomy (β=-0.02; P=0.39) and international market orientation. Hence, we find partial support for hypothesis 7.

The path coefficient between international market orientation and performance is positive (β=0.20) and significant (P<0.01) in both models. Therefore, hypothesis 8 is supported.

Table 3: PLS tests (around here)

In terms of control variables, it might be worth noting that industry and relative size showed no statistically significant association with international market orientation. Size (β=0.103, P=0.063) and age (β=0.177, P=0.004) both were positive and significantly associated with international market orientation.

Ex post analysis has been conducted in line with Lew et al. (2016). For that purpose, the sample has been median split into high and low institutional development and informal institutional different home countries. This allowed us to test for structural differences in the models among the high institutional difference and low institutional difference subsidiaries. That resulted in six subsamples with which the baseline model has been rerun. The results (available on request from the author) show that in the dissimilar institutional development subsample the associations with international market orientation were stronger than in the low institutional development difference countries subsample. That indicates that institutional development difference does have only a limited impact on the tested constructs. Such differences were less pronounced between the high and low informal institutional difference subsamples. The results overall support the findings of our analysis above.

5. Discussion and Conclusions

This research investigated how multilevel MNE competences and institutional differences effect the international market orientation and performance of foreign-owned subsidiaries located in a mid-range emerging economy. We aimed thereby at linking the competence based view of the firm and institutional theory. In the context of foreign-owned subsidiaries located in Taiwan, we shed further light on the discussion on the transferability of competences across country borders. The overall results show that international market orientation is enhancing foreign-owned subsidiary performance, however, we also highlight that there is a complex

interrelationship between multilevel MNE competences, institutional differences, and international market orientation.

In our baseline model, we showed that multilevel MNE competences can be conducive as well as a hindrance in the development of an international market orientation in subsidiaries. In particular, we provide empirical support for Rugman and Verbeke's (2001) and Verbeke's et al. (2016) argument that corporate competences can emerge from different levels of the MNE and have a varying impact on the development of the subsidiary. Our results indicate that autonomy competence and intra-organisational relationship competence are conducive to international market orientation. The headquarters level competences arising from relatedness on the other hand are not. This is perhaps because localisation costs to services and products, required by the subsidiary to expand into other markets, might be prohibitively high for the multinational. At the same time, we also show that relatedness is conducive to the development of intra-organisational relationship competence. This trade-off for the subsidiary shows the delicate balancing act subsidiary managers have to perform between requirements of the subsidiary and the multinational as a whole. Our study therefore also extends the arguments of Verbeke et al. (2016) in showing that competences alone, even under consideration of multi-layered complexity from which they can emerge, are not sufficient to understand subsidiary development and its international market orientation in particular. We show that their interconnections need to be taken into consideration as well.

We then proceeded in investigating the effects of institutional differences as direct impact on international market orientation as well as moderators for the competence associations. Differences in the formal institutional development showed a direct negative effect on international market orientation, but were not statistically significant. This seems to indicate that transactional institutional differences in emerging market economies do not effect international market supply decisions (Dunning & Lundan, 2008; Nguyen & Rugman, 2015). This could be because such direct institutional differences are easier for MNEs to anticipate when conducting business in a mid-range emerging economy which is characterised by relatively stable formal institutions (Hoskisson et al., 2013).

Factor market and infrastructure differences show a direct negative association with international market orientation. This could indicate that in such economies a sufficiently attractive host country market somewhat reduces the incentive to look for international market opportunities (Nguyen & Rugman, 2015). It might also indicate that factor market and infrastructure differences require greater managerial attention.

In line with our expectations, informal institutional difference showed a negative direct association with international market orientation. We thereby also expand previous studies that focussed predominantly on economies within Europe (e.g. Meyer & Estrin, 2014). We show that informal institutional differences create direct costs that hinder the development of international market orientation for subsidiaries located in East Asian emerging markets.

We further extend earlier studies in accounting for moderating effects of institutions on corporate competences and international market orientation. In particular, formal institutional development showed no moderating impact on the relationships between competences and international market orientation. Such institutional differences leave competence and international market orientation relationships unaffected (Slangen & Beugelsdijk, 2010; Hoskisson et al., 2013). We believe that his might be caused by our mid-range economy research context that appears to make this market transaction focussed institutional dimension less relevant for international market orientation development.

This changes however for the moderation effect of factor market and infrastructure differences. We identify a strong positive moderating effect on the autonomy and MNE network competence dimensions. This is an important finding for two reasons. First, we find strong support for institutional arbitrage argument in the literature (Rugman & Verbeke, 2001). Second, our findings suggest that in mid-range emerging economies factor markets and infrastructure development are more relevant than formal institutional differences per se (Berry et al., 2010). That means that factor market and infrastructure differences increase the importance of such competences for the international market orientation. Furthermore, although the association between corporate competences and international market orientation was moderated in the predicted direction, it failed to become statistically significant.

Lastly, our results only show a strengthening moderation of informal institutional differences in the association between headquarter competences and international market orientation. This indicates that informal institutions are not uniformly affecting the competences and international market orientation relationships in foreign-owned subsidiaries. This is an important insight given that much previous literature emphasises the frictional aspects of informal institutions across competence developments in foreign owned subsidiaries (Rugman et al., 2011; Lew at al., 2016). We expand that and show that this friction might only affect competences from a specific source.

5.1. Theoretical and empirical contribution

Our study aimed at contributing theoretically to the combined use of the competence based view of the firm and institutional theory (Oliver, 1997; Martin, 2014; Pattnaik et al., 2015). Our results suggest that multilevel MNE competences have a differing impact on international market orientation, we also add to the literature by indicating that those relationships can be moderated by institutional differences between home and host country. This indicates that institutional context matters for understanding MNE competence development and transfer (Kostova et al., 2016; Lew et al., 2016), and that this context needs to be taken into consideration in a fine grained manner (Holmes et al., 2013; Martin, 2014). For instance, it is not only the informal institutional difference in general that affects decision making in MNEs, it is also the economic development of the host country that needs to be taken into consideration. Further, economic development is here relevant along the two dimensions of formal institutional development and factor markets and infrastructure development (Hoskisson et al., 2013). We also contribute in showing that competences from different levels of the MNE structure can be affected in positive as well as negative ways by institutional differences. We therefore advocate a holistic institutional perspective that goes beyond the more commonly applied frictional view on institutional differences (Zaheer et al., 2012), especially in an emerging economy context. This resulting institutional complexity has hitherto been only briefly discussed in the conceptual literature (Martin, 2014) and has been rarely taken into consideration empirically (a notable exception: Kwon, 2010).

Furthermore, although other studies have investigated the link between competences, institutions, and international market orientation (e.g. Estrin et al., 2008; Meyer & Estrin, 2014; Dahms, 2015), this study is one of the first to our knowledge to do so while considering the moderating impact of institutional difference on multilevel MNE competences and international market orientation. We are also one of the few studies to do so in a mid-range emerging economy in Asia. This is relevant given the increasing importance of such markets for modern MNEs as a destination for FDI as well as an increasing source of the same (Hoskisson et al., 2013).

5.2. Managerial and policy implications

Managers ought to take into consideration how competences that emerge from different levels of the MNE structure and institutional factors affect subsidiary development. In particular, we showed that there is a complex interaction between competences and institutional factors that affect international market orientation. Such differences need to be taken into consideration when FDI decisions are made. Subsidiary managers would be well advised in focussing headquarters attention on institutional issues in order to reduce the risk of getting pushed towards the margins of the MNE network (Bouquet & Birkinshaw, 2008).

Our results indicate that policy makers in host countries might have only limited room to manoeuvre on the formal institutional level once a certain development threshold has been crossed. However, factor market and infrastructure development remain most relevant for subsidiary development even at the later stages of the country economic development cycle. We also show that informal institutional differences do not affect competences across all levels in the same way. In other words, subsidiaries from home countries that differ on the informal institutional dimension can still develop competences and eventually create positive spill over effects for the host economy (Holmes et al., 2013).

5.3. Limitations and future research

This research was based on foreign-owned subsidiaries located in Taiwan. This was justified given the lack of research on subsidiaries located in mid-range emerging economies, as well as the minimisation of confounding effects. However, it would be of interest to expand the research efforts into other emerging economies. This might

be necessary in order to establish the validity of the theoretical predictions in other contexts.

Another important limitation is that our sample is based on a wide range of foreign-owned subsidiaries. This has been done in order to generate a most realistic picture of the subsidiary landscape in Taiwan. However, the smallest of the subsidiaries in our study have only ten employees. This implies that some of those could be too small to have a competence based impact on their international market orientation. Future studies could therefore focus on subsidiaries that have designated competence bearing roles such as centre for excellences status for instance. Lastly, we have not explicitly considered subsidiaries owned by multinational family business groups, which might show different characteristics (Chung & Dahms, 2016).

5.4. Conclusion

This study investigated how multilevel MNE competences and institutional differences influence the international market orientation of foreign-owned subsidiaries located in the mid-range emerging economy of Taiwan. Although we have shown that international market orientation is conducive to subsidiary performance, we also indicated that the determinants of international market orientation are complex. In particular, international market orientation is the result of interplay between multilevel MNE competences and institutional difference as direct and moderating effects.

References

Ambos, T. C., Andersson, U., & Birkinshaw, J. (2010). What are the consequences of initiative-taking in multinational subsidiaries?. *Journal of International Business Studies*, *41*(7), 1099-1118.

Andersson, U., Dasí, À., Mudambi, R., & Pedersen, T. (2016). Technology, innovation and knowledge: The importance of ideas and international connectivity. *Journal of World Business*, *51*(1), 153-162.

Andersson, U., Cuervo-Cazurra, A., & Nielsen, B. B. (2014). From the editors: Explaining interaction effects within and across levels of analysis. *Journal of International Business Studies*, *45*(9), 1063-1071.

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, *17*(1), 99-120.

Bartlett, C. A., & Ghoshal, S. (1989). Managing across borders: The multinational solution. *Harvard business school press, Boston, Massachusetts.*

Batjargal, B., Hitt, M. A., Tsui, A. S., Arregle, J. L., Webb, J. W., & Miller, T. L. (2013). Institutional polycentrism, entrepreneurs' social networks, and new venture growth. *Academy of Management Journal*, *56*(4), 1024-1049.

Berry, H., Guillén, M. F., & Zhou, N. (2010). An institutional approach to cross-national distance. *Journal of International Business Studies*, *41*(9), 1460-1480.

Birkinshaw, J., Hood, N., & Jonsson, S. (1998). Building firm-specific advantages in multinational corporations: The role of subsidiary initiative. *Strategic Management Journal*, *19*(3), 221-241.

Bouquet, C., & Birkinshaw, J. (2008). Weight versus voice: How foreign subsidiaries gain attention from corporate headquarters. *Academy of Management Journal*, *51*(3), 577-601.

Boyenge, J. P. S. (2007). *ILO database on export processing zones (revised)*. Geneva: ILO.

Brouthers, K. D., Brouthers, L. E., & Werner, S. (2008). Resource-Based Advantages in an International Context. *Journal of management*, *34*(2), 189-217.

Chang, S. J., Van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies*, *41*(2), 178-184.

Chidlow, A., Ghauri, P.N., Yeniyurt, S. and Cavusgil, S.T. (2015) 'Establishing rigor in mailsurvey procedures in international business research', *Journal of World Business,50*(1),26–35.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, *295*(2), 295-336.

Chu-Chen, R. Y., Chu-Yen, L., & Shu-Yuan, C. (2014). From West to East: Adoption of Western Measurement Scales in Taiwan's Organizational Research. *Asia Pacific Management Review*, *19*(3), 253-271.

Chung, H. M., & Dahms, S. (2016). Particularistic ties and internationalisation: evidence from Taiwanese family business groups. *European Journal of International Management*, *10*(5), 558-580.

Ciabuschi, F., Dellestrand, H., & Holm, U. (2012). The role of headquarters in the contemporary MNC. *Journal of International Management*, *18*(3), 213-223.

Dahms, S. (2017a). Initiative and networks as determinants of competence levels in foreign-owned subsidiaries: evidence from Taiwan. *Journal for International Business and Entrepreneurship Development*, *10*(2), 189-203.

Dahms, S. (2017b). Determinants of foreign-owned subsidiary performance in emerging economies. Evidence from Taiwan. *Management Research Review*, *40*(6), 626-647.

Dahms, S. (2015). The effects of institutions and subsidiary competence on the international market orientation in foreign-owned subsidiaries. *Management Research Review*, *38*(12), 1285-1305.

Dillman, D.A. (2000) *Mail and Internet Surveys: The Tailored Design Method*, Wiley & Sons, New York.

Dimitratos, P., Liouka, I., & Young, S. (2014). A missing operationalization: entrepreneurial competencies in multinational enterprise subsidiaries. *Long Range Planning*, *47*(1), 64-75.

Doz, Y. L., Santos, J., & Williamson, P. J. (2001). *From global to metanational: How companies win in the knowledge economy*. Harvard Business Press

Dunning, J. H., & Lundan, S. M. (2008). *Multinational enterprises and the global economy*. London: Edward Elgar Publishing.

Estrin, S., Meyer, K. E., Wright, M., & Foliano, F. (2008). Export propensity and intensity of subsidiaries in emerging economies. *International Business Review*, *17*(5), 574-586.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

Gammelgaard, J., McDonald, F., Stephan, A., Tüselmann, H., & Dörrenbächer, C. (2012). The impact of increases in subsidiary autonomy and network relationships on performance. *International Business Review*,*21*(6), 1158-1172.

Gaur, A. S., & Lu, J. W. (2007). Ownership strategies and survival of foreign subsidiaries: Impacts of institutional distance and experience. *Journal of management*, *33*(1), 84-110.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Editorial-partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, *46*(1-2), 1-12.

Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning*, *45*(5), 320-340.

Hair, J.F., Black, W., Babin, B. and Anderson, R.E., (2009), *Multivariate data analysis, 7th edition*, Prentice-Hall: London.

Harzing, A. W., Baldueza, J., Barner-Rasmussen, W., Barzantny, C., Canabal, A., Davila, A., ... & Liang, Y. K. (2009). Rating versus ranking: What is the best way to reduce response and language bias in cross-national research?. *International Business Review*, *18*(4), 417-432.

Hofstede, G. H., (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. London: Sage Publications.

Holmes, R. M., Miller, T., Hitt, M. A., & Salmador, M. P. (2013). The interrelationships among informal institutions, formal institutions, and inward foreign direct investment. *Journal of Management*, *39*(2), 531-566.

Hoskisson, R. E., Wright, M., Filatotchev, I., & Peng, M. W. (2013). Emerging multinationals from Mid-Range economies: The influence of institutions and factor markets. Journal of Management Studies, 50(7), 1295-1321.

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic management journal*, *20*(2), 195-204.

John, G., & Weitz, B. A. (1988). Forward integration into distribution: an empirical test of transaction cost analysis. *Journal of Law, Economics, & Organization*, *4*(2), 337-355.

Ketkar, S., Kock, N., Parente, R., & Verville, J. (2012). The impact of individualism on buyer–supplier relationship norms, trust and market performance: An analysis of data from Brazil and the USA. *International Business Review*, *21*(5), 782-793.

Kock, N. (2016). Hypothesis Testing with Confidence Intervals and P Values in PLS-SEM. *International Journal of e-Collaboration (IJeC)*, *12*(3), 1-6.

Kock, N. (2014a). Stable P value calculation methods in PLS-SEM. *Laredo, TX: ScriptWarp Systems*.

Kock, N. (2014b). Advanced mediating effects tests, multi-group analyses, and measurement model assessments in PLS-based SEM. *International Journal of e-Collaboration (IJeC)*, *10*(1), 1-13.

Kock, N. (2011a). Using WarpPLS in E-Collaboration Studies: Descriptive Statistics, Settings. *International Journal of e-Collaboration (IJeC)*, *7*(2), 1-18.

Kock, N. (2011b). Using Warppls in e-collaboration studies: Mediating effects, control and second order variables, and algorithm choices. *International Journal of e-Collaboration*, *7*(3), 1-13.

Kostova, T., Marano, V., & Tallman, S. (2016). Headquarters–subsidiary relationships in MNCs: Fifty years of evolving research. *Journal of World Business*, *51*(1), 176-184.

Kwon, Y. C. (2010). Market orientation of Korean MNC subsidiaries and their performance in the Chinese and Indian markets. *International Marketing Review*, *27*(2), 179-199.

Larsen, M. M., Manning, S., & Pedersen, T. (2013). Uncovering the hidden costs of offshoring: The interplay of complexity, organizational design, and experience. *Strategic Management Journal*, *34*(5), 533-552.

Lew, Y. K., Sinkovics, R. R., Yamin, M., & Khan, Z. (2016). Trans-specialization understanding in international technology alliances: The influence of cultural distance. *Journal of International Business Studies*, *47*(5), 577-594.

Lin, L. H. (2014). Subsidiary performance: The contingency of multinational corporation's international strategy. *European Management Journal*, *32*(6), 928-937.

Luo, Y. (2003). Market-seeking MNEs in an emerging market: How parent–subsidiary links shape overseas success. *Journal of International Business Studies*, *34*(3), 290-309.

Martin, X. (2014). Institutional advantage. *Global Strategy Journal*, *4*(1), 55-69.

Meyer, K. E., & Estrin, S. (2014). Local context and global strategy: extending the integration responsiveness framework to subsidiary strategy. *Global Strategy Journal*, *4*(1), 1-19.

Monaghan, S., Gunnigle, P., & Lavelle, J. (2014). "Courting the multinational": Subnational institutional capacity and foreign market insidership. *Journal of International Business Studies*, *45*(2), 131-150.

Nguyen, Q. T., & Rugman, A. M. (2015). Multinational subsidiary sales and performance in South East Asia. *International Business Review*, *24*(1), 115-123.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge university press: Cambridge (UK).

Oliver, C. (1997). Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic management journal*, *18*(9), 697-713.

Papanastassiou, M. and Pearce, R. (1999), *Multinationals, technology and national competitiveness*, Edward Elgar: Northampton (UK).

Pattnaik, C., Choe, S., & Singh, D. (2015). Impact of host country institutional context on subsidiary performance. *Management Decision*, *53*(1), 198-220.

Peng, M. W., Wang, D. Y., & Jiang, Y. (2008). An institution-based view of international business strategy: A focus on emerging economies. *Journal of international business studies*, *39*(5), 920-936.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531-544.

Porter, M.E. (1990) *The Competitive Advantage of Nations*, Free Press, New York.

Ready, D. A., Hill, L. A., & Conger, J. A. (2008). Winning the race for talent in emerging markets. *Harvard business review*, *86*(11), 62-70.

Reeb, D., Sakakibara, M., & Mahmood, I. P. (2012). From the editors: Endogeneity in international business research. *Journal of International Business Studies*, *43*(3), 211-218.

Rottig, D. (2016). Institutions and emerging markets: Effects and implications for multinational corporations. *International Journal of Emerging Markets*,*11*(1), 2-17.

Rugman, A. M., Verbeke, A., & Nguyen, P. C. Q. T. (2011). Fifty years of international business theory and beyond. *Management International Review*,*51*(6), 755-786.

Rugman, A. M., & Verbeke, A. (2001). Subsidiary-specific advantages in multinational enterprises. *Strategic Management Journal*, *22*(3), 237-250.

Segaro, E. L., Larimo, J., & Jones, M. V. (2014). Internationalisation of family small and medium sized enterprises: The role of stewardship orientation, family commitment culture and top management team. *International business review*, *23*(2), 381-395.

Shenkar, O. (2001). Cultural distance revisited: Towards a more rigorous conceptualization and measurement of cultural differences. *Journal of international business studies*, *32*(3), 519-535.

Silva, G. M., Styles, C., & Lages, L. F. (2016). Breakthrough innovation in international business: The impact of tech-innovation and market-innovation on

performance. *International Business Review*, http://dx.doi.org/10.1016/j.ibusrev.2016.10.001

Slangen, A. H., & Beugelsdijk, S. (2010). The impact of institutional hazards on foreign multinational activity: A contingency perspective. *Journal of International Business Studies*, *41*(6), 980-995.

US Department of State (2013) BUREAU OF ECONOMIC AND BUSINESS AFFAIRS, 2013 *Investment Climate Statement* – http://www.state.gov/e/eb/rls/othr/ics/2013/204742.htm Taiwan, accessed online, 07.09.2015

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of management review*, *11*(4), 801-814.

Venaik, S., Midgley, D. F., & Devinney, T. M. (2005). Dual paths to performance: The impact of global pressures on MNC subsidiary conduct and performance. *Journal of International Business Studies*, *36*(6), 655-675.

Verbeke, A., Kano, L., & Yuan, W. (2016). Inside the regional multinationals: A new value chain perspective on subsidiary capabilities. *International Business Review*, *25*(3), 785-793.

Verbeke, A., Chrisman, J. J., & Yuan, W. (2007). A note on strategic renewal and corporate venturing in the subsidiaries of multinational enterprises. *Entrepreneurship Theory and Practice*, *31*(4), 585-600.

Wan, W. P., & Hoskisson, R. E. (2003). Home country environments, corporate diversification strategies, and firm performance. *Academy of Management journal*, *46*(1), 27-45.

Werts, C. E., Linn, R. L., & Jöreskog, K. G. (1974). Intraclass reliability estimates: Testing structural assumptions. *Educational and Psychological measurement*, *34*(1), 25-33.

Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.

White, G. O., Hemphill, T. A., Joplin, J. R., & Marsh, L. A. (2014). Wholly owned foreign subsidiary relation-based strategies in volatile environments. *International Business Review*, *23*(1), 303-312.

World Bank (2011). *World Bank's ENTERPRISE SURVEY UNDERSTANDING THE QUESTIONNAIRE*. http://www.enterprisesurveys.org/~/media/GIAWB /EnterpriseSurveys/Documents/Methodology/Questionnaire-Manual.pdf, accessed online, 14.09.2016

Yamin, M., & Andersson, U. (2011). Subsidiary importance in the MNC: What role does internal embeddedness play?. *International Business Review*, *20*(2), 151-162.

Yeganeh, H. (2014). A Weighted, Mahalanobian, and Asymmetrical Approach to Calculating National Cultural Distance. *Journal of International Management*, *20*(4), 436-463.

Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management journal*, *38*(2), 341-363.

Zaheer, S., Schomaker, M. S., & Nachum, L. (2012). Distance without direction: Restoring credibility to a much-loved construct. *Journal of International Business Studies*, *43*(1), 18-27.

Tables and figures from the text:

Figure 1: Full model

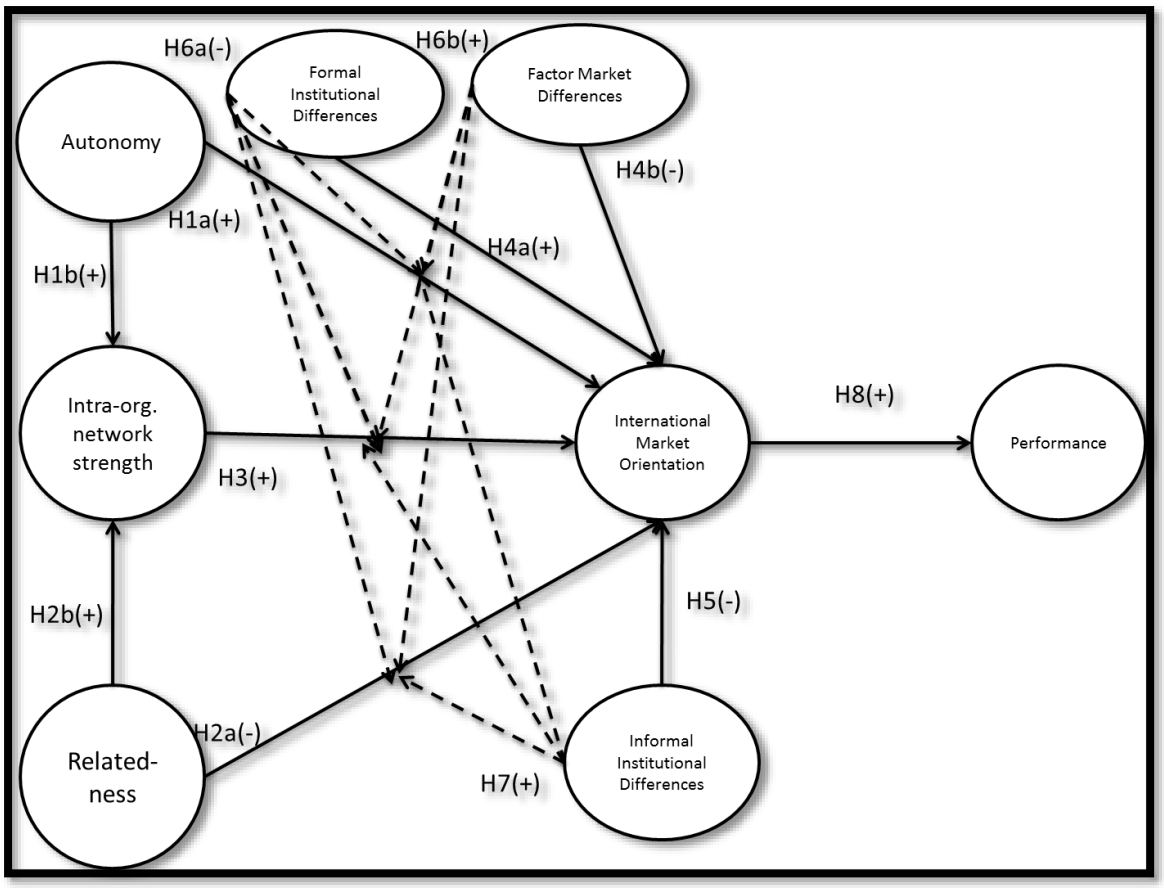

Table 1: The measurement model & constructs

	Mean	SD	Convergent validity	Composite reliability	Cronb. Alpha	AVE
Autonomy competence				0.932	0.911	0.694
Please indicate where the strategic (i.e. policy) decisions are made for the following areas. (Exclusively by headquarters=1, Exclusively by the subsidiary=7)						
Market Area Supplied	3.82	2.15	0.876			
Product Range	3.59	2.19	0.841			
R&D and New Prod. Dev.	3.38	2.10	0.844			
Producing Goods / Service	3.94	2.08	0.851			
Financial Control	3.78	1.96	0.772			
Human Resource	4.41	2.09	0.759			
International Market Orientation				0.856	0.774	0.6
Please indicate the importance of the following markets that your subsidiary directly supplies. (1=not important, 7= very important)						
Japan	4.56	2.01	0.725			
Mainland China	4.63	1.94	0.758			
Rest of Asia Pacific	4.00	1.87	0.770			
Rest of the world	3.77	1.91	0.755			
Intra-organisational competence				0.871	0.814	0.575
Indicate the strength of relationships you have with each of the following actors (1= very weak, 7= very strong						
Buyers	5.31	1.44	0.829			
Suppliers	5.42	1.39	0.833			
R&D Centres	5.25	1.67	0.648			
Headquarters	6.03	1.10	0.632			
Other units	5.63	1.22	0.709			
Relatedness competence				0.892	0.757	0.805
To what extent do you agree with the following statements? (1= fully disagree, 7= fully agree)						
"*Generally,* products and services *at our site are the same as our parent company*"	5.9	1.20	0.844			
"*Generally, we operate in*	5.92	1.29	0.868			

the same industry *as our parent company*"			
Performance	0.941	0.906	0.841
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)			
Profitability	5.49	1.18	0.828
Sales	5.38	1.20	0.862
Market share	5.39	1.18	0.886

Table 2: Discriminant validity

		1	2	3	4	5	6	7	8
1	Autonomy competence	*0.833*							
2	Intra-org. competence	0.124	*0.758*						
3	Relatedness competence	.190**	.205**	*0.897*					
4	International Market Orientation	.208**	.249**	-0.058	*0.774*				
5	Performance	.210**	.436**	.314**	.230**	*0.917*			
6	Formal institutional development	0.004	-0.11	-.163*	-0.001	-0.09	*1*		
7	Factor market development	0.007	0.018	0.117	-.140*	0.039	-.439**	*1*	
8	Informal institutional difference	0.011	-0.051	-.139*	-0.109	-0.066	.489**	.312**	*1*

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

Table 3: PLS tests

	Path coefficient	P-Value	Hypothesis supported
Hypothesis 1a: Autonomy and international market orientation.	β=0.22	P<0.01	yes
Hypothesis 1b: Autonomy and intra-organisational network.	β=0.15	P<0.01	yes
Hypothesis 2a: Relatedness and international market orientation.	β= -0.18	P<0.01	yes
Hypothesis 2b: Relatedness and intra-organisational network.	β=0.21	P<0.01	yes
Hypothesis 3: Intra-organisational network and international market orientation.	β=0.18	P<0.01	yes
Hypothesis 4a: Formal institutional development and international market orientation.	β= -0.02	P= 0.38	no
Hypothesis 4b: Factor market development and international market orientation.	β= -0.10	P= 0.07	yes
Hypothesis 5: Informal institutional difference and international market orientation.	β= -0.13	P= 0.03	yes
Moderated model			
Hypothesis 6a: Formal institutional development			
○ Autonomy	β=0.06	P= 0.18	
○ Intra-organisational network	β= 0.00	P= 0.49	No
○ Relatedness	β= -0.01	P= 0.43	

Hypothesis 6b: Factor market development			
o Autonomy	β=0.19	P <0.01	partially
o Intra-organisational network	β=0.13	P =0.02	
o Relatedness	β=0.03	P= 0.35	
Hypothesis 7: Informal institutional difference			
o Autonomy	β= -0.02	P= 0.39	
o Intra-organisational network	β= -0.03	P= 0.35	partially
o Relatedness	β=0.11	P= 0.04	
Hypothesis 8: International market orientation and performance.	β=0.20	P<0.01	yes

Appendix:

Table A: Factor analysis

Rotated Component Matrix					
	Component				
	1	2	3	4	5
DMA_PRange	*0.876*	0.033	-0.009	0.08	0.043
DMA_PRange	*0.841*	0.062	0	0.091	0.129
DMA_RD	*0.844*	0.047	0.08	0.1	-0.01
DMA_Prod	*0.851*	-0.042	0.118	0.028	0.044
DMA_Finance	*0.772*	0.022	0.126	0.115	0.012
DMA_HR	*0.759*	0.053	0.067	0.014	0.08
Market_JPN	0.049	-0.008	-0.04	*0.725*	0.132
Market_PRC	0.071	0.193	-0.033	*0.758*	0.002
Market_AsiaPacific	0.141	0.141	0.202	*0.77*	-0.254
Market_Rest	0.107	-0.01	0.219	*0.755*	-0.092
INTRA_Buyers	0.066	*0.829*	0.053	0.192	-0.021
INTRA_Supp	0.097	*0.833*	0.001	0.108	0.018
INTRA_RD	0.095	*0.648*	0.291	0.207	0.122
INTRA_HQs	-0.147	*0.632*	0.197	0.001	0.037
INTRA_Others	0.07	*0.709*	0.237	-0.148	0.118
REL_Product	0.086	0.068	0.249	-0.051	*0.844*
REL_Industry	0.135	0.119	0.077	-0.049	*0.868*
PERF_Profit	0.122	0.283	*0.828*	0.078	0.136
PERF_Sales	0.1	0.21	*0.862*	0.106	0.119
PERF_MarketS	0.102	0.154	*0.886*	0.094	0.106

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Table B: Variance inflation factors

	Autonomy	Intra-organisational relationships	Relatedness	Formal institutional difference	Factor markets	International Market Orientation	Informal institutional difference	Industry	Age	Relative Size	Size	Performance	Formal*Autonomy	Formal*Intra-organisational networks	Formal*Relatedness	Factor*Autonomy	Factor*Intra-organisational	Factor*relatedness	Informal*Relatedness	Informal*Intra-organisational networks	Informal*Autonomy
Intra-organisational relationships	1.022		1.022																		
International Market Orientation	1.193	2.265	1.447	1.329	3.123		2.036	1.219	1.233	1.028	1.125		1.691	2.916	1.811	2.357	1.586	3.966	1.409	1.918	1.367
Performance						1.085		1.097	1.152	1.005	1.101										

Note: Variance inflation factors (VIFs) are provided for all predictor latent variables in each block

Table C: Model fit and quality indices

	Baseline model	Moderation model	Range
Average path coefficient (APC)	0.137, P=0.010	0.107, P= 0.027	P <= 0.05
Average R-squared (ARS)	0.153, P=0.006	0.178, P=0.002	P <= 0.05
Average adjusted R-squared (AARS)	0.130, P=0.013	0.145, P=0.007	P <= 0.05
Average block VIF (AVIF)	1.163	1.635	acceptable if <= 5, ideally <= 3.3
Average full collinearity VIF (AFVIF)	1.549	2.930	acceptable if <= 5, ideally <= 3.3
Tenenhaus GoF (GoF)	0.366	0.380	small >= 0.1, medium >= 0.25, large >= 0.36
Sympson's paradox ratio (SPR)	1.000	0.923	acceptable if >= 0.7, ideally = 1
R-squared contribution ratio (RSCR)	1.000	0.994	acceptable if >= 0.9, ideally = 1
Statistical suppression ratio (SSR)	0.941	0.917	acceptable if >= 0.7
Nonlinear bivariate causality direction ratio (NLBCDR)	0.882	0.885	acceptable if >= 0.7