

## **The Moderating Impact of Informal Institutional Distance and Formal Institutional Risk on SME Entry Mode Choice**

**Christian Schwens, Julia Eiche and Ruediger Kabst**

*University of Giessen*

**ABSTRACT** Considerable research has explored international mode choices. However, results regarding the direct influence of the host country institutional context on entry mode choice remain rather inconclusive with positive, negative, and mixed empirical findings. This study examines informal institutional distance and formal institutional risk as moderators on the relationship between frequently examined decision-making criteria and the entry mode decision of small and medium-sized enterprises (SMEs). We demonstrate that the influence of international experience, proprietary know-how, and strategic importance on SME mode choice is contingent on the institutional context of the host country. Hypotheses are tested on a sample of 227 German SMEs. Our empirical results support our theoretical predictions, which forge a link between institutional and SME entry mode literature.

### **INTRODUCTION**

Entry mode choice refers to the preferences of multinational enterprises (MNEs) when they decide how to enter foreign markets. Typically, entry modes are classified according to the share of equity taken by the foreign investor. Joint ventures and wholly owned subsidiaries present equity modes of entry, while non-equity entries include contractual agreements and exports (Brouthers and Nakos, 2004; Erramilli and D'Souza, 1993; Nakos and Brouthers, 2002). Entry mode choice received considerable attention in internationalization literature with numerous theoretical and empirical contributions (for qualitative reviews, see Brouthers and Hennart, 2007; Slangen and Hennart, 2007; for quantitative meta-analyses, see Morschett et al., 2010; Tihanyi et al., 2005; Zhao et al., 2004).

Institutional theory is among the four most frequently applied theoretical approaches in entry mode literature (Brouthers and Hennart, 2007). The institutional context – composed of informal and formal institutions (North, 1990) – may significantly challenge

*Address for reprints:* Christian Schwens, University of Giessen, Faculty of Economics and Business Administration, Chair for Human Resource Management, SMEs, and Entrepreneurship, Licher Str. 62, 35394 Giessen, Germany (christian.schwens@wirtschaft.uni-giessen.de).

an MNE's entry mode choice from two perspectives. On the one hand, institutional context determines the extent of prevailing *informal institutional distance*, which we define as the cultural and ideological differences between a firm's home and host country.<sup>[1]</sup> Entering informally-distant countries, firms are challenged to bridge differences between the home and host country market (Cuervo-Cazurra and Genc, 2011, this issue; Estrin et al., 2009). On the other hand, the institutional context determines the extent of *formal institutional risk*, which we define as the constraints resulting from insufficiently developed market support institutions in the host country. In cases of high formal institutional risk, firms face additional hazards, restrictions, and costs resulting from less advanced or incomplete political, economic, and legal institutions (Henisz, 2000; Meyer et al., 2009).

Despite the popularity of institutional theory, existing findings on the influence of institutions on entry mode choice are largely inconclusive. Whereas some authors found that companies facing challenges from the host country institutional context tend to choose non-equity entry modes rather than equity modes (e.g. Brouthers and Nakos, 2004; Nakos and Brouthers, 2002), others, such as Dikova and van Witteloostuijn (2007), found the opposite relationship. Some authors did not find significant effects at all (e.g. Burgel and Murray, 2000). While most studies examined the direct influence of institutions on entry mode choice, only few studies tried to achieve more idiosyncratic findings and investigated the interactive effect of institutions in combination with firm capabilities (e.g. Delios and Henisz, 2000; Henisz, 1998).

This paper examines the moderating impact of host country informal institutional distance and formal institutional risk on the relationship between frequently studied decision-making criteria and SME entry mode choice. We add to current research by demonstrating that the institutional context does not influence mode choice independently, but in combination with other important entry mode decision-making criteria frequently studied in the field. Specifically, we investigate informal institutional distance and formal institutional risk of the host country as moderators on the relationship between international experience, proprietary know-how, strategic importance, and entry mode choice. This contributes to resolving the inconclusive findings regarding the role of institutions currently holding back the field. Thus, we follow Brouthers and Hennart's (2007, p. 407) advice that 'the way forward in this area is to examine the interactive effects of institutional factors on other decision-making criteria'.

We study the interactive effects of the institutional context on a sample of German SMEs. Most entry mode studies focused on large MNEs (e.g. Agarwal and Ramaswami, 1992). The limited consideration of SMEs may be due to the fact that some authors demonstrated that theories developed for large MNEs (i.e. transaction cost economics or ownership location internalization) also work reasonably well in predicting SME entry mode choice (e.g. Brouthers and Nakos, 2004; Nakos and Brouthers, 2002).

However, some studies have shown that results from large MNEs are not fully generalizable for SMEs in particular in situations of diverging levels of uncertainty exerting particular pressure on the SME (e.g. Erramilli and D'Souza, 1993, 1995). These studies suggest that studying the moderating influence of institutional context is particularly pertinent to SMEs. SMEs are likely to react more sensitively (Brouthers and Nakos, 2004) to challenges arising from the institutional context, because they face greater resource scarcity and differences in ownership and dependence (Nakos and Brouthers,

2002). Without the sheer economic muscle of larger firms, SMEs have fewer financial and personal resources and cannot diversify risk in response to challenges arising from the institutional context (Brouthers and Nakos, 2004; Erramilli and Rao, 1993). In addition, SMEs are more flexible than large MNEs due to their size and a lesser degree of organizational inertia (Criscuolo and Narula, 2007; Hannan et al., 2002). Thus, we expect that the interactive effect of the institutional context matters in particular for SMEs, and we contribute to a better understanding of how SME mode choice unfolds under diverging levels of challenges arising from the institutional context. Testing our hypotheses on a sample of 227 German SMEs **is of particular relevance**, because SMEs are commonly regarded as the backbone of the German economy (Simon, 1996).

Empirically, we apply a new procedure to study interaction terms in logistic regression models that may not only advance entry mode research specifically, but management research in general studying categorical dependent variables. Interaction effects are more complex to compute and interpret in non-linear models (Hoetker, 2007). We follow the procedure of Ai and Norton (2003) and Jaccard (2001) to provide **a more detailed interpretation of interaction terms at low, medium, and high levels of the moderator**.

## BACKGROUND LITERATURE

Two lines of inquiry in the entry mode literature have in particular informed this research: (a) studies on the influence of the institutional context on the entry mode decisions; and (b) studies that distinguish the strategies of SME and large MNE with respect to entry mode choice. We briefly summarize each of these research streams in turn.

Institutional theories have been frequently applied to study entry mode behaviour. Institutional approaches focus on social actors and 'the ways that differently constituted groupings of social actors control economic activities and resources' (Whitley, 1999, p. 32). Social actors are embedded in the institutional environment providing 'the rules of the game in a society' (North, 1990, p. 3). New institutionalism distinguishes between informal and formal institutions. Informal institutions have a primarily cultural background describing patterns of behaviour concerning trust, collaboration, identity, and subordination (Whitley, 1999). They include '... socially sanctioned codes of conduct and norms of behaviour which are embedded in culture and ideology' (Peng, 2000, p. 42). In contrast, formal institutions are manifested in political rules, legal decisions, and economic issues (Peng, 2000). They determine the nature of private property rights, access to finance, the development of skills and knowledge, and labour relations (Whitley, 2005).

Prior entry mode research primarily differentiated between two perspectives to theorize about the role of informal and formal institutions (Slangen and van Tulder, 2009). First, with regard to informal institutions, entry mode research focused on the distance between home and host country. Large informal institutional distance tends to increase the challenges of doing business in the host country (Xu and Shenkar, 2002). Greater differences in culture and ideology between home and host country increase the costs and risks of doing business. The greater the informal institutional distance between home and target country, the more difficult it is to transfer the former management model

(Gelbuda et al., 2008) and adapt to local practices and preferences (Slangen and van Tulder, 2009). Studying the direct influence of informal institutional distance on firms' entry mode choice produced mixed empirical findings so far. Several studies found that informal institutions are negatively related to entry mode choice (e.g. Erramilli and Rao, 1993), while others found positive associations (e.g. Anand and Delios, 1997). Some studies arrived at mixed results (e.g. Chang and Rosenzweig, 2001), or non-significant findings (e.g. Luo, 2001). To resolve the various empirical findings Tihanyi et al. (2005) conducted a meta-analysis. However, regression results failed to provide statistical evidence of significant relationships between informal institutional context and entry mode choice. Based on their results, Tihanyi et al. (2005) concluded that substantial additional research is needed before the role of the informal institutional context is fully understood.

Second, entry mode research focused on the level of risk in the formal institutional set-up of the host country. Strong, established institutions with predictable 'rules of the game' provide support for efficient business transactions (Gelbuda et al., 2008). In contrast, weak formal institutions are characterized by institutional restrictions and constraints (Peng, 2000). For example, when property rights are not granted, repatriations of earnings are not ensured, and business rules are variable, the formal institutional set-up implies high risk and hinders a firm's economic acting. The higher the formal institutional risk of the host country, the more the firm is challenged to adapt its business to insufficiently functioning political, legal, or economic institutions. Previous findings on the influence of formal institutional risk on entry mode choice are inconclusive as well. Whereas Kwon and Konopa (1993) found a positive influence of host country risk on entry mode choice, Brouthers and Nakos (2004) found a negative relationship. Burgel and Murray (2000) did not find a significant effect for target country risk on entry mode choice.

The second stream of research relevant to this paper is the literature on SME entry mode choice. Studies on SME entry mode choice are far more limited than studies focusing on large MNEs, leading scholars to request more research in this area (Mudambi and Navarra, 2002; Ramamurti, 2004). A reason for the limited consideration of SMEs might be that argumentations explaining large MNE mode choices seemed applicable to SMEs as well. For instance, Brouthers and Nakos (2004) and Nakos and Brouthers (2002) applied models of large firm mode choice (i.e. transaction cost economics or ownership location internalization) to SME entry mode choice. Their findings suggested that both models did a good job in explaining SME entry mode choice.

However, Goodnow and Hansz (1972) observed that knowledge from the entry mode behaviour of large MNEs is not fully transferable to SMEs. In situations exerting particular pressure on the SME – such as high levels of uncertainty – SME entry mode behaviour merits particular attention due to the SME's inherent characteristics. For example, Erramilli and D'Souza (1995) found that the relationship between uncertainty arising from the host country context and firm mode choice is moderated by firm size. Furthermore, Erramilli and D'Souza (1993) studied the entry mode behaviour of small service firms opposed to that of large firms. They found that, under low levels of capital intensity, SME entry mode behaviour was comparable to that of large MNEs. However, under high levels of capital intensity, SME mode choice required particular attention because of the SMEs' limited resources and differences in ownership, management, and

independence. Thus, the literature on SME entry mode choice is fragmented as well. Whereas some authors have shown that theoretical models applicable to large MNEs work well in the context of SMEs (Brouthers and Nakos, 2004; Nakos and Brouthers, 2002), others provided empirical evidence that SME entry mode behaviour requires particular attention when high levels of context-related challenges exert particular pressure on the SME (Erramilli and D'Souza, 1993, 1995; Li and Qian, 2008). Considering both streams of literature, it is important to forge a link between the institutional and SME literature. However, a systematic investigation of how SME mode choice is contingent on the host country institutional context is missing so far.

The present study contributes to resolving the above mentioned research deficits by studying the moderating influence of informal institutional distance and formal institutional risk on the relationship between international experience, proprietary know-how, strategic importance, and SME entry mode choice. To date, only a few studies have considered the moderating influence of institutions. Henisz (1998) studied the moderating influence of public expropriation hazards on the relationship between contractual hazards and mode choice of large multinationals. Delios and Henisz (2000) studied the moderating influence of organizational capabilities (experience and partner capabilities) on the relationship between expropriation hazards (public and private) and ownership. These two studies found empirical support that large MNE mode choice is contingent on the interplay between firm capabilities and institutional factors. Complementing the concept of informal institutional distance with the level of institutions-related formal risk in the host country, our study is more comprehensive than the aforementioned studies. Moreover, the present study is different from previous research as it puts particular attention on SMEs, which have been shown to react particularly sensitively to environmental uncertainty. Thus, we add to the aforementioned studies by explicitly investigating the moderating influence of both informal institutional distance and formal institutional risk on the relationship between international experience, proprietary know-how, and strategic importance and SME entry mode choice.

## **HYPOTHESES**

A firm's international experience is an important determinant of entry mode choice (Agarwal and Ramaswami, 1992; Henisz, 2000). International experience can reduce the costs and risks of foreign market entry, making higher level entry mode choice more attractive (Sanchez-Peinado et al., 2007). Past research confirms that firms with greater international experience tend to prefer equity based entry modes, while firms without international experience tend to choose non-equity modes of entry (e.g. Agarwal and Ramaswami, 1992; Brouthers and Nakos, 2004; Nakos and Brouthers, 2002).

In contexts characterized by strong informal institutional distance and high formal institutional risks, firms may benefit from their international experience. Through their earlier exposure to different local institutional contexts, internationally experienced firms are knowledgeable about and have learned to do business in foreign cultures. They know how to handle challenging institutional contexts characterized by incomplete and underdeveloped formal institutions. SMEs suffer less from organizational inertia compared to large MNEs due to their smaller size (Criscuolo and Narula, 2007; Hannan et al., 2002).

This increases learning efficiency and reduces the likelihood of knowledge being misapplied (Haleblian and Finkelstein, 1999; Hayward, 2002). SMEs thus possess some learning advantages over large MNEs (Autio et al., 2000), reducing the risk that international experience is improperly applied.

These arguments suggest that SMEs with international experience continue to prefer equity based entry modes while venturing into countries with high levels of informal institutional distance and formal institutional risk. Internalized knowledge enables them to choose equity based entry modes in different institutional contexts. Informal institutional distance and formal institutional risk moderate the relationship between international experience and equity based foreign entry modes. In summary, we hypothesize:

*Hypothesis 1a:* The positive relationship between an SME's international experience and its choice of equity based entry modes increases with higher informal institutional distance between the home and the host country.

*Hypothesis 1b:* The positive relationship between an SME's international experience and its choice of equity based entry modes increases with higher formal institutional risk of the host country.

The level of a firm's proprietary know-how is considered to be a critical determinant of foreign market entry strategy (Erramilli and Rao, 1993; Luo, 2001). According to Brouthers and Nakos (2004), a company can protect its specific knowledge to minimize transaction costs by integrating foreign operations. If a firm possesses proprietary know-how, it has to take extra precautions to protect itself from knowledge diffusion into the hands of competitors (Klein, 1989). Previous research has shown that firms with proprietary know-how prefer to internalize their specific transactions. They tend to select equity based entry modes as a control mechanism to safeguard their proprietary knowledge (Brouthers and Brouthers, 2003; Delios and Henisz, 2000; Gatignon and Anderson, 1988; Kim and Hwang, 1992).

Venturing into host countries with high informal institutional distance and high formal institutional risk exposes the SME to additional challenges of know-how protection. High informal institutional distance may increase the likelihood of exposure to opportunistic behaviour from foreign market players. To minimize opportunistic behaviour and diffusion of specific knowledge, firms need to establish specific control mechanisms (Gatignon and Anderson, 1988; Klein et al., 1990). In countries with high formal institutional risk, the political and legal frameworks do not support efficient and functioning intellectual property rights. When formal institutional risk is high, property rights protection is generally weak in both enactment and enforcement. Without sufficient legal protection, a firm's property rights and tacit knowledge (patents, trademarks, brands, know-how, copyrights, etc.) can be exposed to piracy (Luo, 2001).

One way to deal with these challenges is internal control, which can be achieved through hierarchical ownership (Klein et al., 1990). Henisz (1998) demonstrated these effects studying the moderating impact of political hazards on the relationship between contractual hazards and minority versus majority equity control. Although the argumentation is valid for any type of firm, we argue that it is particularly important for SMEs,



which are known for targeting niche markets with knowledge intensive and specialized products (Nakos and Brouters, 2002). SMEs possess a more limited resource endowment than large MNEs, which can afford to capitalize on efficiency, scale, and scope. Know-how protection through internalization of transactions takes on major importance for SMEs operating in foreign contexts with high informal institutional distance and formal institutional risk. For them knowledge protection often determines firm survival.

We argue that SMEs with proprietary know-how facing high informal institutional distance and high formal institutional risk tend to internalize their international activities more than they do in countries with low informal institutional distance and low formal institutional risk. We derive the following hypotheses:

*Hypothesis 2a:* The positive relationship between an SME's proprietary know-how and its choice of equity based entry modes increases with higher informal institutional distance between the home and the host country.

*Hypothesis 2b:* The positive relationship between an SME's proprietary know-how and its choice of equity based entry modes increases with higher formal institutional risk of the host country.

Moreover, prior research has shown that the strategic importance of a foreign activity determines the choice of market entry modes (e.g. Glaister and Buckley, 1996). An investment in a particular target market is considered strategically important when it is essential for a firm's global plan (Isobe et al., 2000). According to Kim and Hwang (1992), strategic motivations are achieved with tight coordination. Tight coordination is best effected by high control entry modes such as equity based entry modes (Chang and Rosenzweig, 2001; Isobe et al., 2000).

When informal institutional distance and formal institutional risk are high, market forecasts are randomized and estimating expected strategic potentials becomes difficult. High informal institutional distance and formal institutional risk inhibit long-term planning and considerably increase the challenges of operating in the host country. Operations that are owned by foreign companies may be at a disadvantage when the institutional context is complex. SMEs need to ensure flexible reactions in order to guarantee sustainable firm development (Oviatt and McDougall, 1994). However, equity based market entries imply less flexibility for SMEs. When entering foreign markets with a challenging institutional context, SMEs may best safeguard their strategically important international activities by market entries that are not equity based. Flexible and dynamic behaviour are then maintained. Hence, we assume that the positive relationship between strategic importance and the choice of equity based entry modes weakens when informal institutional distance and formal institutional risk are high. We derive the following hypotheses:

*Hypothesis 3a:* The positive relationship between an SME's strategic importance of an international activity and its choice of equity based entry modes decreases with higher informal institutional distance between the home and the host country.

*Hypothesis 3b:* The positive relationship between an SME's strategic importance of an international activity and its choice of equity based entry modes decreases with higher formal institutional risk in the host country.

## METHODOLOGY

### Data

Our empirical analysis is based on data gathered from internationally active German SMEs. We define SMEs as firms with up to 500 employees, which is in line with prior research (e.g. Brouthers and Nakos, 2004) and adheres to the commonly applied classification of the German Institute of SMEs (1997, p. 15). According to this definition, we used the Hoppenstedt company directory to identify 2549 internationally active German SMEs. Data collection took place via standardized postal survey. Questionnaires were sent to CEOs or firm owners, perceived to be most knowledgeable about the firm's internationalization practices and strategic decisions. The sample included German firms only and the questionnaire was in German, taking established back-translation literature for internationally established items into consideration (Brislin, 1970; van de Vijver and Hambleton, 1996). A total of 257 questionnaires were completed and returned (response rate of 10.1 per cent). Due to missing data, our final sample includes 227 firms. The mean size of the firms in our sample is 243 employees.

As we had some missing data in our sample, we conducted tests as suggested by Little and Rubin (1987) and Allison (2002) showing no significant results. Further, we controlled the returned questionnaires for non-response bias according to Armstrong and Overton (1977). We compared early and late respondents in terms of selected constructs. A *t*-test showed no significant differences.

Lacking panel data and applying a retrospective recall in our survey, the obvious disadvantages of such a method necessitate further comment. The primary problem with such data is that key informants may not be able to accurately recall the past. Furthermore, it may be that respondents make false post-hoc attributions, raising causality concerns (Golden, 1992; Huber and Power, 1985; Wolfe and Jackson, 1987). Asking for the foreign entry mode choice of the firm and its major influence factors, there could be a problem of inaccurate recall and wrong post-hoc attributions of the perception of firm actions and the characteristics of these actions. However, our sample includes a significant number of family businesses (~80 per cent). As we addressed the questionnaire to the top management, the likelihood that the CEO and, hence, respondent was involved in the entry mode decision-making processes is high. Particularly in family businesses, the CEO is often closely related to the founder of the firm or established the company himself. According to Golden (1992) and Miller et al. (1997), this high involvement may significantly reduce the risk of informant fallibility and wrong post-hoc attributions. Further, Miller et al. (1997, p. 197) suggest in their analysis of both retrospective and non-retrospective strategy data '... that CEO reliability is no lower in retrospective than in non-retrospective reports'. Thus, we assume that false post-hoc attributions and causality issues are not a major concern for our data. Moreover, the causality



assumptions made in this paper are in line with Bogner et al. (1996), arguing that mode choice in a foreign market depends on a firm's pool of internal competencies, core skills, and core products.

## Measurement

Modes of entry have been classified quite differently in previous research (for a comprehensive overview on the hierarchy of entry modes, see figure 1 in Pan and Tse, 2000). Modes of entry can be classified as equity based versus non-equity based. At the next level of hierarchy, equity modes are often further split into joint ventures and wholly owned operations (e.g. Delios and Henisz, 2000), while some studies differentiate within the group of wholly owned operations between greenfield and acquisition (e.g. Slangen and Hennart, 2007). Non-equity modes are mostly divided into contractual agreements and export (e.g. Burgel and Murray, 2000).

While the dominating literature on large MNEs differentiates either between joint ventures and wholly owned subsidiaries or between greenfield and acquisition, studies investigating SME entry mode choice compared between equity versus non-equity modes (e.g. Brouthers and Nakos, 2004; Erramilli and D'Souza, 1993; Nakos and Brouthers, 2002). Pan and Tse (2000) argue that equity versus non-equity modes should be preferred, because it works out the significance of determinants of mode choice that otherwise failed to have an impact. Pan and Tse (2000) found that host country factors have a high impact on the decision between equity versus non-equity modes, whereas they have a lower influence within non-equity or within equity mode decisions. A further argument for choosing a non-equity versus equity classification is that 80 per cent of the firms in our sample are family enterprises. Studies have demonstrated that it is important for family enterprises to have full market control and to preserve independence (e.g. Brouthers and Nakos, 2004). Family enterprises are less willing to share control in, for instance, equity joint ventures. For them the major decision is either to establish a wholly owned subsidiary or to choose non-equity based market entry modes. Following this argumentation, we measured the dependent variable *entry mode choice* by a dichotomous item. Companies which chose equity based entry modes (coded '1') were distinguished from those which chose non-equity entry modes (coded '0').

Theorizing about informal institutional distance and formal institutional risk in our paper, we applied a distance measure and a level measure to display our moderator variables. The first moderator variable *informal institutional distance* is related to differences between the home and host country in terms of culture and ideology. In our study, informal institutional distance is measured by indices from the GLOBE study (House et al., 2004; Javidan and House, 2001). We selected the 'practices' indices, because the entry mode decision is most likely determined by the existing rather than the ideal foreign market situation (as expressed by 'values' in GLOBE). Applying the GLOBE indices to display informal institutional distance has been conducted by other management scholars such as Estrin et al. (2009).

The Hermes Country Risk Rating was used to measure the second moderator variable *formal institutional risk* prevalent in the host country. It is the most frequently used country credit risk index in Germany. The Hermes scale divides countries into seven categories.

Countries with minimal country risk are coded '1' and high risk countries are coded '7'. Hermes integrates three groups of indicators concerning the economic, political, and legal situation in the host country. Economic indicators include information on, for instance, economic growth, labour cost/productivity, or availability of short-term/long-term loans and venture capital. The political dimension includes, for example, the influence of host country political forces, political instability, or legislative effectiveness. The legal dimension includes information on, for instance, enforceability of contracts, expropriation, or judicial effectiveness. The data are drawn from institutions such as, for example, IMF, World Bank, and OECD, taking the latest available information into account.

We measured the direct variables by multiple-item Likert-scales adapted from previous studies in order to minimize measurement error and to enhance the content coverage for the constructs in our model. *International experience* was measured using a 6-item scale (Cronbach's alpha: 0.882) adapted from existing literature (Agarwal and Ramaswami, 1992; Brouthers and Nakos, 2004) considering international experience of the management and the firm in general (Burgel and Murray, 2000). For example, respondents were asked whether the management had prior and long standing international experience or whether the firm had prior international joint ventures or wholly owned foreign subsidiaries.

*Proprietary know-how* was measured using a two-item scale (Cronbach's alpha: 0.721) adapted from earlier research (Brouthers and Brouthers, 2003; Erramilli and Rao, 1993). The respondents were asked whether they needed proprietary know-how for their products or services and whether internal know-how had to be transferred into the foreign market.

*Strategic importance* was measured using a 3-item scale (Cronbach's alpha: 0.749) adapted from Isobe et al. (2000), Kim and Hwang (1992), and Luo (2001). The respondents were asked whether foreign market entry had high strategic importance for the firm or whether important disadvantages were expected in case of failure.

We included *firm size* as a control variable, measured by the (log) number of full-time employees of the company. The size of the firm is often used as an indicator of resource availability, which is particularly important for SMEs. We included a dichotomous item differentiating between *family business* and non-family business in order to control for the owner status of the company (family business coded '1', non-family business coded '2'). The owner is a major strategic decision maker in SMEs concerning issues such as entry mode choice. Different motives for foreign market entry in the statistical analyses were also included. The impact and structure of motives is supposed to play a major role in internationalization (e.g. Tatoglu et al., 2003). For that reason, the motives *learning in the foreign market* and *access to market* are included in our analyses. We also controlled for the *resource endowment* at the point of foreign market entry, which is a key issue for SMEs when it comes to internationalization efforts. We asked how resource endowment hampered the foreign market entry of the firm. Finally, a dummy *industry* variable controlling for low-tech (coded as '1') versus high-tech (coded as '0') firms was included, as prior research has shown that an industry's technological level influences an SME's entry mode decision (Burgel and Murray, 2000). When applying multi-item measures, the Cronbach's alpha values for the scales show good internal consistency and reliability in all constructs (Nunnally, 1978).

When all dependent and independent variables come from a single respondent there is always the chance of common method variance (CMV) (Hair et al., 1995). However, in this study we do not believe it is a problem for at least four reasons. First, our dependent variable (entry mode choice) is not the kind that would create bias (because it is an objective measure rather than a perception) (Brouthers and Brouthers, 2003). Second, our moderator variables (informal institutional distance and formal institutional risk) were obtained from secondary sources. Third, we included several interaction terms in our model which 'is likely to reduce CMV because such a complex relationship is, in all likelihood, not part of the respondents' theory in use' (Chang et al., 2010, p. 180). Fourth, we used the one factor test suggested by Podsakoff and Organ (1986) to look for potential common method bias. When we loaded our variables we found that four factors were extracted. The largest factor explained 18.5 per cent of the variance.

## Empirical Results

Table I presents the means and standard deviations of all variables in the model as well as their bivariate correlations.

The correlation coefficients depicted in Table I showed no serious risk for multicollinearity (Anderson et al., 1996). We calculated the variance inflation factor values (VIF) to test the extent to which values of the coefficients increased due to collinearity. Our analyses for the relevant variables show several VIF values with the highest value of 2.2 (maximum recommended by Allison, 1999 is 2.5). Thus, there is no serious risk for multicollinearity between the dependent, control, direct, moderator, and interaction variables (Anderson et al., 1996).

To test our hypotheses, we used binary logistic regression analysis. The application of interaction terms in logistic regression models requires explanation. There has been an ongoing debate in the literature about the difficulties in applying this methodology (Li and Meyer, 2009; Powers, 2005; Shaver, 2005). Just recently, Hoetker (2007) commented critically on the use of logit and probit models in strategic management research, stating that interaction effects are complicated to compute and interpret in non-linear models (Norton et al., 2004). Interaction effects cannot simply be interpreted by looking at the sign, magnitude, or statistical significance of the coefficient on the interaction term when the model is non-linear. We computed and interpreted the interaction effects in our models according to Ai and Norton (2003) and Jaccard (2001). We computed the correct marginal effect of a change in the interacted variables in our logit model and identified the correct standard errors by applying commands suggested by Norton et al. (2004). Due to the scales of the two moderator variables, informal institutional distance and formal institutional risk, subgroup analysis was not applicable (Maxwell and Delaney, 1993; McCallum et al., 2002). We set up five models to display our results. In Model 1, we entered the control variables. Model 2 implies the control variables, the direct variables, and the moderator variables. Model 3 includes the informal institutional distance interaction terms, and Model 4 implies the formal institutional risk interaction terms. The final model, Model 5, includes all control, direct, moderator, and interaction terms. This way of reporting moderator models is adapted from other management studies (e.g. Delios and Henisz, 2000). We applied a significance level of 10 per cent, as

Table I. Means, standard deviations, and correlations of the dependent, control, moderator, and interaction variables

<i>Correlation Matrix</i>		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
<i>Mean</i>		0.453	2.49	2.42	2.68	3.98	1.62	-0.001	0.022	-0.003	0.104	0.031	0.156	2.43	1.2	1.91	2.45	3.6	0.236	
<i>Standard Deviation</i>		0.499	0.83	1.01	0.8	0.553	1.08	0.459	1.134	0.549	1.326	0.431	1.212	1.31	0.403	0.954	0.939	0.702	0.425	
1	Entry mode choice (dependent variable)	1																		
2	International experience	0.298***	1																	
3	Proprietary know-how	0.226***	0.187**	1																
4	Strategic importance	0.320***	0.204***	0.328***	1															
5	Informal institutional distance	-0.051	-0.003	-0.005	0.07	1														
6	Formal institutional risk	0.057	0.02	0.085	0.154*	-0.365***	1													
7	International experience × informal institutional distance	0.003	-0.055	-0.054	0.092	-0.121	0.234***	1												
8	International experience × formal institutional risk	0.065	0.093	0.005	0.071	0.217***	0.018	-0.444***	1											
9	Technological intensity × informal institutional distance	0.054	-0.056	-0.025	0.082	-0.06	0.057	0.268***	-0.087	1										
10	Technological intensity × formal institutional risk	0.093	0.014	-0.007	0.124	0.058	0.349***	-0.096	0.302***	-0.276***	1									
11	Strategic importance × informal institutional distance	-0.021	0.1	0.077	-0.032	-0.319	0.054	-0.019	-0.047	0.276***	-0.182**	1								
12	Strategic importance × formal institutional risk	0.022	0.075	0.089	0.145*	0.042	0.499***	-0.04	0.472***	-0.146*	0.571***	-0.358***	1							
13	Firm size	0.111	0.047	0.024	0.018	-0.075	0.105	0.131*	0.039	0.022	0.071	-0.025	0.194**	1						
14	Family business	-0.065	-0.036	0.042	0.06	0.078	-0.008	0.141*	-0.159	0.025	-0.026	0.055	-0.082	-0.104	1					
15	Resource endowment	-0.038	-0.255***	0.069	-0.011	0.155*	-0.07	-0.076	0.009	0.071	-0.026	-0.077	-0.037	-0.114	-0.130*	1				
16	Motiv learning in the foreign market	0.253***	0.162*	0.260***	0.287***	-0.087	0.034	0.021	-0.077	-0.03	-0.049	0.099	-0.064	0.091	0.069	0.02	1			
17	Motiv access to market	-0.013	0.077	0.178**	0.149*	0.042	-0.260***	-0.150*	-0.072	-0.099	-0.002	0.018	-0.12	0.019	-0.042	0.074	0.083	1		
18	Industry dummy	0.042	0.025	0.074	0.116	0.094	-0.150*	-0.01	-0.006	0.029	-0.055	-0.026	-0.046	-0.084	-0.082	0.106	0.004	0.063	1	

Note: Significance levels: \*\*\* p ≤ 0.001; \*\* p ≤ 0.01; \* p ≤ 0.05; † ≤ 0.1.

detecting interaction effects with a regression analysis is rather difficult in field studies (McClelland and Judd, 1993). Table II presents the results of the binary logit model.

Model 1 illustrates the effect of the control variables on entry mode choice. Results show that only the motive learning in the foreign market is significantly associated with entry mode choice.

In Model 2, we included the well-established direct variables of entry mode choice, namely international experience, proprietary know-how, and strategic importance. We also included the moderator variables informal institutional distance and formal institutional risk. Adding these variables provided for a higher variance explanation.  $R^2$  increased from 0.104 to 0.281 (Nagelkerke) and from 0.078 to 0.210 (Cox and Snell), respectively. We found positive and significant relationships between international experience as well as strategic importance and entry mode choice. We did not find a positive association between proprietary know-how and entry mode choice. To a certain extent, these findings challenge previous literature which builds on transaction cost reasoning and argues that firms with proprietary know-how tend to internalize transactions while internationalizing. We found a significant direct effect neither for informal institutional distance nor for formal institutional risk on entry mode choice. Previous studies have discussed the direct effects of the institutional context quite heterogeneously. Our results support the argumentation that it is not the direct effects that matter. Instead, the major decision-making criteria of entry mode choice are contingent on the moderating effect of institutional context.

In Model 3, we included the informal institutional distance interaction terms (compared to Model 2,  $R^2$  increased from 0.281 to 0.295 (Nagelkerke) and from 0.210 to 0.221 (Cox and Snell), respectively). In Model 4, we included the formal institutional risk interaction terms (compared to Model 2,  $R^2$  increased from 0.281 to 0.310 (Nagelkerke) and from 0.210 to 0.232 (Cox and Snell), respectively). In our final Model 5, we included all interaction terms simultaneously. Adding all product variables provided for a higher variance explanation (compared to Model 2).  $R^2$  increased from 0.281 to 0.344 (Nagelkerke) and from 0.210 to 0.257 (Cox and Snell), respectively. In order to better interpret the interaction terms, we followed Jaccard (2001) and Hoetker (2007) and supplemented the numerical information with plots of the predicted probabilities. 'A graphical presentation provides the reader with the most complete understanding of interaction's effect' and provides assistance to interpret the complex associations related with interactions in logit models (Hoetker, 2007, p. 337). As suggested by Jaccard (2001), we selected a low, medium, and high score of the moderator variable to illustrate the curves. The low level condition was defined as a standard deviation below the mean of the moderator, the medium level condition was defined as the mean, and the high level condition as a standard deviation above the mean of the moderator (Jaccard, 2001). Figures 1 to 4 present our plots for the probabilities of entry mode choice (dependent variable) as a function of prior international experience, proprietary know-how, strategic importance (direct variables), and informal institutional distance and formal institutional risk (moderator variables).

In Hypotheses 1a and 1b, we proposed that informal institutional distance and formal institutional risk strengthen the positive relationship between international experience and equity based entry mode. The results do not support Hypothesis 1a. It appears that

Table II. Results of binary logistic regression (dependent variable: equity based market entry mode)

<i>Binary logistic regression analysis</i> (dependent variable: entry mode choice)	<i>Model 1</i> control variables	<i>Model 2</i> + direct variables + moderator variables	<i>Model 3</i> + informal interaction variables	<i>Model 4</i> + formal interaction variables	<i>Model 5</i> + formal and informal interaction variables
<b>Direct variables</b>					
International experience		0.661***	0.709***	0.699***	0.803***
Proprietary know-how		0.214	0.232	0.323†	0.443*
Strategic importance		0.785***	0.751***	0.711**	0.594*
<b>Moderator variables</b>					
Informal institutional distance		-0.319	-0.434	-0.391	-0.578
Formal institutional risk		-0.115	-0.122	-0.037	0.032
<b>Interaction variables</b>					
International experience × informal institutional distance			-0.159		0.074
Proprietary know-how × informal institutional distance			0.400†		0.635*
Strategic importance × informal institutional distance			-0.627		-1.125*
International experience × formal institutional risk				0.211†	0.363†
Proprietary know-how × formal institutional risk				0.409*	0.614*
Strategic importance × formal institutional risk				-0.318†	-0.600*
<b>Control variables</b>					
Firm size	0.001	0.002	0.001	0.002	0.002
Family business	-0.360	-0.454	-0.430	-0.433	-0.443
Resource endowment	-0.123	0.045	0.019	0.059	0.023
Motive learning in the foreign market	0.564**	0.328*	0.361*	0.392*	0.484**
Motive access to market	-0.143	-0.298	-0.267	-0.360	-0.304
Industry dummy	0.267	0.059	0.058	0.137	0.160
Constant	-1.398	-0.008	-0.144	-0.016	-0.295
R <sup>2</sup> (Nägelkerke)	0.104	0.281	0.295	0.310	0.344
R <sup>2</sup> (Cox & Snell)	0.078	0.210	0.221	0.232	0.257
Chi-square	18.41	53.50	56.55	59.84	67.30
Correct classifications	63.9	70.5	70.9	71.2	71.4
Significance	0.005	0.000	0.000	0.000	0.000
N	227	227	227	227	227

Notes: N = sample size; R<sup>2</sup> = variance. Significance levels: \*\*\* p ≤ 0.001; \*\* p ≤ 0.01; \* p ≤ 0.05; † p ≤ 0.1.



when the informal institutional distance between home and host country is high, international experience does not necessarily support SMEs in overcoming prevailing institutional pressures. It may be that informal institutional knowledge is particularly tacit and complex (Tallman and Chacar, 2011, this issue) and that international experience does not easily allow the transfer of this tacit knowledge from one country to the next. Hypothesis 1b is supported with a significant and positive interaction effect between international experience and formal institutional risk. The plots in Figure 1 show that at high levels of formal institutional risk, international experience has a stronger influence on choosing equity based entry modes, whereas when formal institutional risk is low, the effect becomes significantly weaker.

This result expands existing knowledge, primarily showing a positive relationship between international experience and equity based entry mode choice, and the particular importance of international experience under conditions of high formal institutional risk.

We found empirical support for Hypotheses 2a and 2b, in which we assumed that informal institutional distance and formal institutional risk positively moderate the relationship between proprietary know-how and entry mode choice. Figure 2 illustrates that in environments characterized by high informal institutional distance, firms with high proprietary know-how tend to prefer equity based entry modes over non-equity modes.

This result supplements previous entry mode studies which applied transaction cost reasoning. Our finding shows that firms internalize transactions when they perceive high risk of opportunistic behaviour by foreign market players from different cultural backgrounds. SMEs have to safeguard their knowledge to prevent the loss of competitive advantages through the opportunistic behaviour of other foreign market players.

Figure 3 supports Hypothesis 2b. When formal institutional risk is high, SMEs with proprietary know-how tend to internalize transactions in order to secure knowledge from

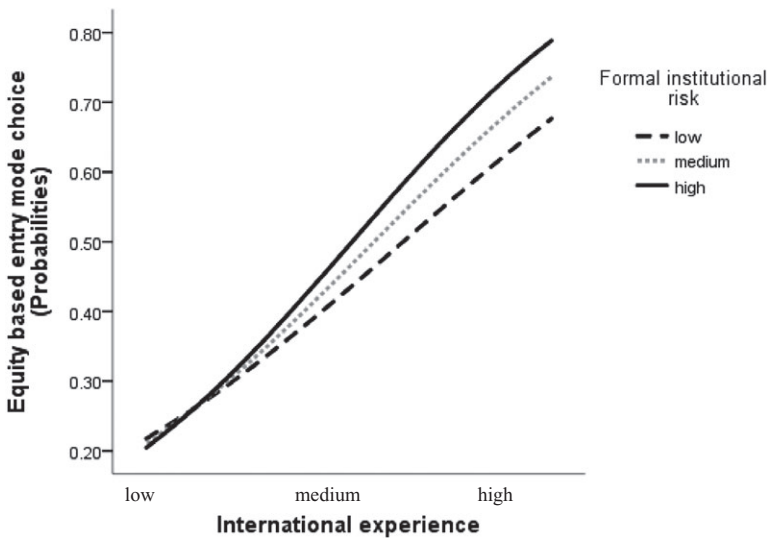


Figure 1. Formal institutional risk, international experience, and entry mode

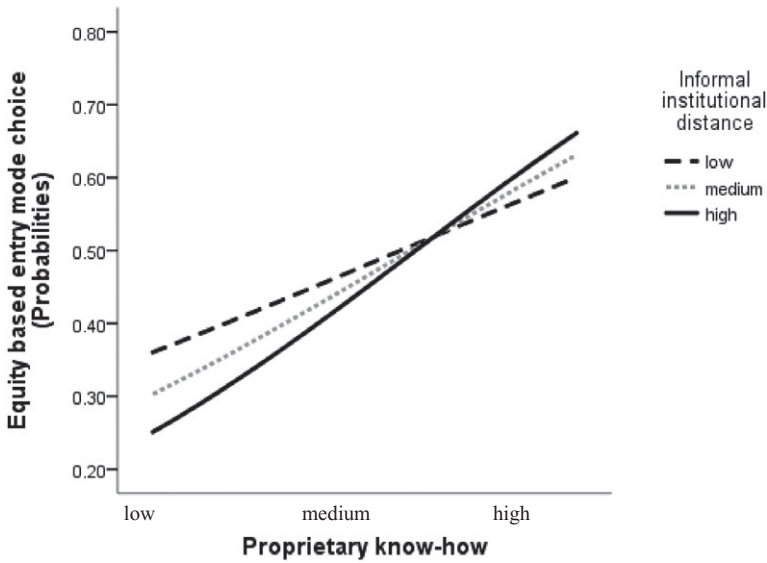


Figure 2. Informal institutional distance, proprietary know-how, and entry mode

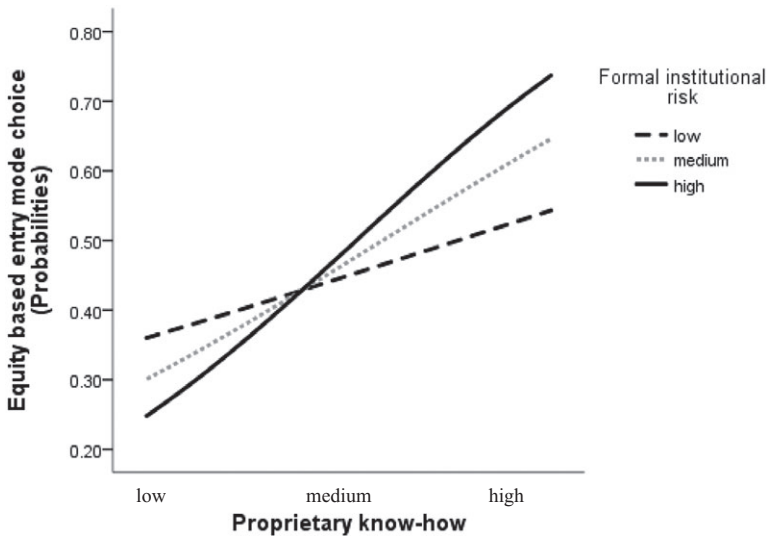


Figure 3. Formal institutional distance, proprietary know-how, and entry mode

expropriation. These findings add to the knowledge from previous studies (e.g. Henisz, 1998) showing that it is not only the formal institutional risk of the host country that matters, but to a similar extent the informal institutional distance and the risk for opportunistic behaviour of foreign market partners.

Hypotheses 3a and 3b proposed that informal institutional distance and formal institutional risk negatively impact the relationship between strategic importance and the

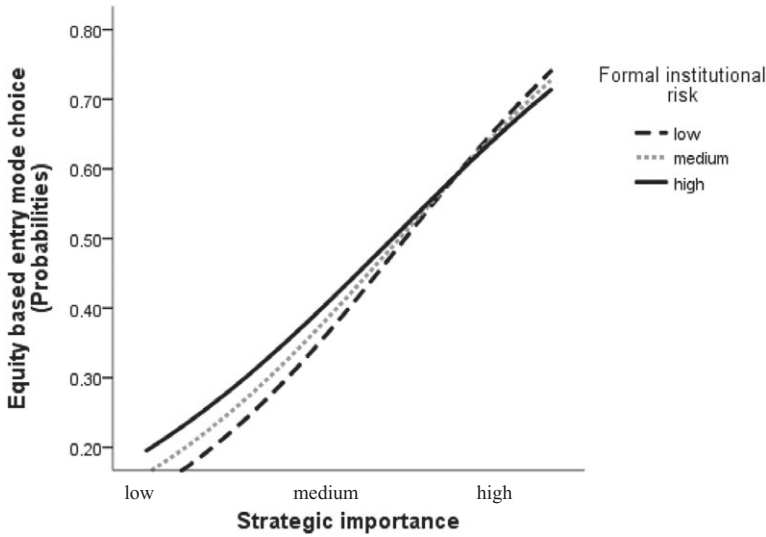


Figure 4. Formal institutional risk, strategic importance, and entry mode

choice of equity based market entry modes. We do not find support for our assumptions from Hypothesis 3a regarding the interaction of informal institutional distance and strategic importance. Although the interaction term in Model 5 has been significant, the effect was insignificant in Model 3 where only the informal institutional interaction terms were included.

The plots from Figure 4 provide more detailed results on the moderating role of formal institutional risk on the relationship between strategic importance and entry mode choice. At high levels of formal institutional risk, strategic importance is negatively related to equity based entry modes. However, at low and medium levels of formal institutional risk, the relationship between strategic importance and equity based entry modes is positive. The plots provide results which cannot simply be interpreted from the negative coefficient in Table II. If an investment is strategically important, it is positively related to equity based entry modes when formal institutional risk is low or medium. Formal institutional risk determines the entry mode decision in strategically important issues. Our results imply that the influence of strategic importance on equity based entry mode is contingent on formal institutional risk. Whereas previous studies have largely ignored the institutional environment perspective, our findings suggest that this may be of particular importance.

## CONCLUSION AND LIMITATIONS

The aim of our study was to analyse the impact of the institutional context on foreign market entry strategies among SMEs. We proposed that informal institutional distance and formal institutional risk moderate the relationships between international experience, proprietary know-how, strategic importance, and equity based entry modes. Our results contribute to existing knowledge on entry mode research. We found that the

relationships between well-established direct effects on entry mode choice are contingent on the institutional context. Our study offers an integrated approach for examining the effect institutions have on SMEs and their entry mode choice. In line with previous findings, the direct effects of informal institutional distance and formal institutional risk did not have a significant impact on entry mode choice. Until now, results had been inconclusive and inconsistent with regard to the direct effects, underscoring the importance of our work and indicating the need for further in-depth research on this topic.

Methodologically, we applied moderator analysis as suggested by Ai and Norton (2003) and Jaccard (2001). We suggest that this procedure may advance existing management literature. After a review of the economic journals between 1980 and 1999 listed by JSTOR, Ai and Norton (2003) maintained that none of the 72 articles which included non-linear models with explicit interaction terms interpreted the interaction coefficient correctly. Recent studies in management research critically reflect on the complex issue of interaction effects in non-linear models as well (Li and Meyer, 2009; Powers, 2005; Shaver, 2005). Our results suggest that a combination of the procedure advanced by Ai and Norton (2003) and supplementing the numerical information with plots as suggested by Jaccard (2001) may be an appropriate means to study interaction terms when the dependent variable is non-linear. To advance existing research, the technique applied in this paper may be an option for researchers studying interaction terms in models with categorical dependent variables.

As is the case for most empirical studies, our work has some limitations. A concern may be the assumption of homogeneity in the use of indices such as GLOBE (House et al., 2004; Javidan and House, 2001). Indices measuring informal institutional distance generally assume that the average of a country is an appropriate measure of the cultural environment of the specific internationalization project (Shenkar, 2001). However, countries may vary internally to a large extent, which may point out a clear limitation for the application of GLOBE indices (Meyer and Nguyen, 2005). Nonetheless, we consider the assessment of informal institutional distance to be best measured by the GLOBE indices for management and organization issues. They build on such established indices as the World Value Survey, and provide a very cohesive and integrated picture of cross-cultural issues.

The measurement of formal institutional risk is based on the Hermes Country Risk Rating, a relatively unknown index in international business research. Whereas other indices such as the Euromoney Index are more frequently used to assess the formal institutional set-up and are thus easier to compare and relate to other empirical studies, the Hermes Index is unique to Germany. We see the advantages of using internationally established ratings; however, we preferred to use a rating more familiar to our respondents as they utilize it for their market assessment. It may also be argued that the Hermes Country Risk Index puts special emphasis on political, economic, and legal measures in the institutional environment. However, we believe that these dimensions capture the most important issues relevant for the SME entry mode decision-making process and best represent our definition of formal institutional risk. We therefore consider the Hermes Country Risk Index to reflect a robust image of the relevant formal institutional system from a management perspective.

Another limitation of the study is that the analysis is based on cross-sectional rather than panel data. Given the interesting findings with regard to the influence of the informal institutional distance and formal institutional risk found in our study, a useful extension for future research would be to examine the evolution of foreign entry modes using a longitudinal design. This would allow for explicit modelling of the impact of experience, proprietary know-how, and strategic importance by looking at firms over time.

Our findings have several implications for SME managers. We propose that in addition to firm-specific determinants, SMEs should take the host country's institutional context into account when entering foreign markets. Managers should recognize that both informal and formal institutional aspects have an impact on their entry mode decision. When considering and bridging the differences between the firm's home and host country, managers are better prepared to decide whether to choose an equity based or non-equity based entry mode. Our results suggest that prior international experience helps overcome pressures from formal institutional risk in the host country. Even when the political, governmental, and legal situations in the host country are challenging, internationally experienced SMEs may prefer to choose equity based market entries. Furthermore, to safeguard internal know-how, SMEs with high proprietary know-how should opt for equity based entry modes even in situations of large informal institutional distance and high formal institutional risk. Finally, when SMEs assign high strategic importance to a foreign market entry, managers should be particularly aware that high formal institutional risk may change the preferred entry mode from equity based to non-equity based modes. For managers of SMEs, a comprehensive assessment of a host country's institutional context is vital for a full grasp of the challenges which can arise when entering into the foreign market.

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## NOTE

- [1] Our focus is on the distance between the home and host country in terms of culture and ideology. 'Added' distance as discussed by Hutzschenreuter et al. (2011, this issue) seems to be less relevant for SMEs compared to large MNEs. SMEs are confronted with the primary challenge to internationalize at all or to initiate first steps in a limited number of foreign markets (e.g. Baird et al., 1994). Large MNEs operate regularly in a number of foreign markets. Their challenge is to coordinate with and learn from a greater diversity of global activities, making the topic of 'added' culture more relevant.

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