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How early opposed to late internationalizers learn: Experience of others and paradigms of interpretation

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ABSTRACT

Although learning plays a pivotal role in the internationalization context of the firm, studies elaborating aspects of learning of early internationalizers (as opposed to late internationalizers) are largely missing. We address this deficit by examining the process of learning in the entry phase of internationalization. Our empirical results show that learning from direct experience is negatively related to early internationalization, whereas learning from others and learning from paradigms of interpretation have a positive impact on early internationalization. Furthermore, our results suggest that early internationalizers compared to late internationalizers continue to prefer cooperative modes of market penetration and show higher entry-mode stability in the same country.

1. Introduction

An early venture into international markets has been suggested to be crucial as "[a]ge at internationalization is assumed to have important implications for [the] companies' successful expansion, survival and performance" (Sapienza, Autio, George, & Zahra, 2006; Zahra, 2005, p. 21). Whereas early exposure to a foreign environment encourages growth opportunities shaping a subsequent competitive position, it also exposes a firm to fundamental challenges. Facing different kinds of liabilities of foreignness already at the entry stage, the entrant firm is at a disadvantage compared to indigenous competitors. To reduce these liabilities the firm needs to learn about particularities of the foreign market before entering. The question is how does the learning differ between early and late internationalizers? Our study examines early internationalizers[2] and their learning behavior opposed to late internationalizers (Autio, Sapienza, & Almeida, 2000; Eriksson, Johanson, Majkgard, & Sharma, 1997). Autio, Sapienza, and Almeida (2000) argue that early and late internationalizers have similar knowledge development processes; however, the pace of learning is much faster in early than in late internationalizing firms. Comparing entry learning behavior helps to understand how early as opposed to late internationalizers gain a competitive market position in a foreign environment right from inception (Oviatt & McDougall, 1994; Zahra, 2005).

The aim of our paper is twofold. First, we examine the impact of three different types of learning (learning from direct experience, learning from experience of others, and learning from paradigms of interpretation) on the likelihood of early

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[2] The phenomenon of early internationalization has been attributed with different labels such as international new ventures (Oviatt and McDougall, 1994), global start-ups (Oviatt and McDougall, 1995), global high-tech firms (Jones, 1999), high technology start-ups (Jolly et al., 1992), innate exporters (Ganitsky, 1989) or born globals (Madsen and Servais, 1997). Our study uses the term early internationalizer as we put an emphasis on the timing of internationalization (and not on the volume or scope of internationalization).

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compared to late internationalization. Second, addressing the impact of early opposed to late internationalization, we elaborate the imprinting effects on subsequent entry-mode choice and entry-mode stability in the same country.

We base our reasoning on learning theory by Levitt and March (1988) who differentiate between three types of learning; (1) *learning from direct experience* describes the extent to which a firm generates and distributes knowledge within the boundaries of the firm, (2) *learning from experience of others* is the extent to which the firm is exposed to knowledge about foreign markets from network partners, and (3) *learning from paradigms of interpretation* is the extent to which the firm learns by imitating routines of firms, which are perceived to be best practices in the focal market. The three different learning types do not mutually exclude each other; however, excelling all the three types of learning is often difficult to do (Bierly & Chakrabarti, 1996). "Due to scant resources, limited management attention, and the nature of the firm's culture, firms tend to be better suited to excel at either internal or external learning" (Gopalakrishnan & Bierley, 2006, p. 5). We argue that late internationalizers are more likely to apply direct learning as they possess established competence, a more experienced workforce, and experience in the industry, all of which promote dealing with trajectories through direct learning (Gopalakrishnan & Bierley, 2006; March, 1991; Sorenson & Stuart, 2000; Stinchcombe, 1965). In contrast, we assume early internationalizers to have a stronger need to learn from the experience of others and from paradigms of interpretation compared to late internationalizers. Early internationalizing firms do not have the "[...] time and patience to base their foreign investments on experience from their own current activities" (Forsgren, 2002, p. 275). Whereas late internationalizers learn from direct experience by accumulating knowledge over time (Johanson & Vahlne, 1977; Johanson & Vahlne, 1990), early internationalizers learn from the experience of others and from paradigms of interpretation (Cohen & Levinthal, 1990; Levitt & March, 1988; March, 1991). This learning pattern helps early internationalizers to overcome liabilities such as newness, size, and foreignness, and allows for rapid internationalization (Zahra, 2005).

To achieve our research aim we proceed as follows: first, we provide a brief review of prior literature on learning and early internationalization opposed to late internationalization. Second, we introduce a framework based on learning theory and derive hypotheses on the learning process leading to early (compared to late) internationalization as well as on the imprinting effect on subsequent entry-mode choice and entry-mode stability in the same country (Cohen & Levinthal, 1990; Levitt & March, 1988; March, 1991). We test our hypotheses on a cross-industry sample of internationally operating German firms, differentiating between early and late internationalizers. The final section summarizes the results, points out limitations and hints at aspects for future research.

2. Literature review

Prior empirical studies in the field of early internationalization have focussed on the learning implications of internationalization. Zahra, Ireland, and Hitt (2000) examine the effects of international expansion (international diversity and mode of market entry) on post-entry technological learning of the firm. The results indicate that the management of new ventures pays particular attention to integrating the knowledge gained from foreign market expansion. Yeoh (2004) applied learning-based theory for the study of technological, market, and social learning. Sapienza, De Clercq, and Sandberg (2005) applied learning theory combined with attention-based view to examine the antecedents of international and domestic learning effort.

Emphasizing the imprinting effect of early internationalization, Autio et al. (2000) found earlier initiation of internationalization and higher knowledge intensity to be associated with faster international growth. Autio et al. (2000) suggest that due to learning advantages of newness, young firms are better able to assimilate new knowledge as they adapt to and innovate more rapidly in new and dynamic environments. Early internationalizers show faster international growth than firms internationalizing later in their lifecycle and possibly suffering from organizational inertia. The work by Autio et al. (2000) has been extended by Sapienza et al. (2006), who elaborate on the effects of firm survival.

Summarizing the literature review, we can conclude that so far existing studies focus on the antecedents of learning effort, on the antecedents of technological, market and social learning, as well as on the effect of early internationalization on technological learning. Studies elaborating the impact of different types of learning on early internationalization opposed to late internationalization as well as the influence of early and late internationalization on subsequent entry-mode choice and entry-mode stability in the same country are largely missing. However, these aspects are of major importance as early internationalizers "[...] appear to differ in the extent of their learning, but the sources of these variations are not well defined" yet (Zahra, 2005, p. 25). The perspective taken in our paper builds up on Autio et al. (2000, p. 912) claiming "that the pace of a firm's international growth is regulated not only by the accumulation of foreign organizing knowledge, but also by the amount of time the firm has devoted solely to domestic operations."

3. Theory

3.1. Types of learning

In order to study learning of early and late internationalizers, we apply learning theory building on the works by Levitt and March (1988) and Cohen and Levinthal (1990). According to Levitt and March (1988), learning is routine-based, history-dependent, and target-oriented. The authors define learning as "encoding inferences from history into routines that guide [future] behavior" (Levitt & March, 1988, p. 319). Thus, learning is largely a function of prior related knowledge (Cohen &

Levinthal, 1990). Learning is multifaceted and includes aspects such as the content of learning (what is learned?), the subject of learning (who is learning?), the incentives and motives for learning (why does learning take place?), and the efficiency and effectiveness of learning (which results does learning yield?). Aspects of learning have so far found widespread attention in entrepreneurship research. In a special issue of ''Entrepreneurship Theory and Practice''[3], the scope for applying concepts of learning within the field of entrepreneurship (Harrison & Leitch, 2005, p. 351) has been elaborated in depth. This journal issue addresses dynamic learning perspectives (Cope, 2005), the process of entrepreneurial learning (Politis, 2005), the nature of entrepreneurial opportunities (Dutta & Crossan, 2005), organizational learning and opportunity-recognition (Lumpkin & Lichtenstein, 2005), experiential learning (Corbet, 2005), and explorative and exploitative learning (Schildt, Maula, & Keil, 2005). Further, reviewing the literature on organizational learning shows the importance of dynamic aspects and organizational change as well as imprinting effects over time (Grant, 1996; Nonaka, 1994; Spender, 1996; Weick, 1991).

Our focus is on the process of learning and thus on the question of how entry learning unfolds. There has been an ongoing debate in the internationalization literature regarding whether or not entry learning is conceivable. Influential scholars among the internationalization process theorists argue that it is primarily people working in the foreign market who gain foreign market knowledge (Carlson, 1975; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975), and that opportunities for entry learning are relatively low. Forsgren (2002, p. 272) claims that some ''firms invest abroad without possessing any substantial market knowledge if the perceived risk of investing abroad is lower than the perceived risk of not investing abroad.'' According to Forsgren (2002), such behavior is mainly observed in rapidly internationalizing firms striving for first mover advantages and extreme short-term growth, which leads them to venture abroad without having substantial knowledge of the market conditions. However, Forsgren (2002, p. 272) himself admits that the obvious failure of some of these firms demonstrates that entry learning is an important factor determining firm survival. Casson (1994) has also stated that it is hard to conceive foreign market particularities without acquiring entry learning about the foreign market environment. Thus, in line with Pedersen and Petersen (2004, p. 106), we not only assume that entry learning is conceivable, but that it is essential for the success and in some cases even for the survival of a firm in the foreign market. Therefore, firms have to emphasize entry learning even if, or particularly when they venture into foreign markets early in their lifecycle.

According to Johanson and Vahlne (1977), firms learn experientially in a reactive way during their internationalization process. Accumulating direct experience about foreign markets over time and combining new and existing knowledge enables firms to develop a solid resource base, easing the initial move from an established domestic market into an international one. Late internationalizers have advantages over early internationalizers in the area of direct learning. Most importantly, they have reliable resources and established routines for incremental learning. Late internationalizers opposed to early internationalizers are more likely to have an experienced workforce and knowledgeable management teams to facilitate the entry learning process from direct experience (March, 1991; Sorenson & Stuart, 2000; Stinchcombe, 1965). However, when late internationalizers try to learn from others or from paradigms of interpretation they often encounter social conflicts due to established routines which make them less flexible (Oliver, 1997). Difficulties of learning from external sources for late internationalizers become more evident the larger the gap between the internal organizational routines and the environment (Barron, West, & Hannan, 1994; Henderson, 1999; Ranger-Moore, 1997). Therefore, we posit that late internationalizers follow a process of stepwise knowledge development based on existing know-how from the domestic market. Learning from direct experience characterizes these firms.

In contrast, early internationalizers exhibit proactive risk-seeking behavior by initiating foreign market commitments (Oviatt & McDougall, 1994). Early internationalizers – short in resources[4] – need to develop mechanisms to substitute for lack of experience. They do so through direct interfacing with their environment. Early internationalizers have the stronger need and greater ability to learn from others and from paradigms of interpretation. Less resistance within the company enables faster and better transfer of outside knowledge throughout the organization (Rosenkopf & Nerkar, 2001). Early internationlizers are more flexible in their structure and behavior, and are more eager to learn from others (Ranger-Moore, 1997; Sorenson & Stuart, 2000).

Early internationalizers learn about foreign markets through networking and interpreting paradigms such as best practices in the focal market. Forsgren (2002) supports such a learning pattern for early internationalizing firms as opposed to learning from direct experience. He argues (2002, p. 271) ''[...] that the perceived risk [of venturing abroad] can be affected through other means than own experience. These 'shortcuts' to lower perceived risk include 'grafting' the experience of others into the firm, [...] and imitating firms that for some reason are considered to be market leaders (Björkman, 1996). [...] The important point here is that the firm will approach the foreign markets more rapidly and maybe in another pattern than is predicted by the Uppsala Model'' (Forsgren, 2002, p. 271).

It may be argued that a firm applies all three types of learning simultaneously and well-balanced; however, combining the different types of learning is in most cases difficult. Scholars in innovation and entrepreneurship literature have observed that leveraging both internal and external knowledge is hard to manage. According to Bierly and Chakrabarti (1996), limited resources, limited management attention, and the firm's culture compel companies to excel either internal or external learning. Considering the conflict of managing internal and external learning related to R&D, Hitt, Hoskisson, Ireland, and

[3] Entrepreneurship Theory & Practice 2005, vol. 29, issue 4.
[4] Referring to early internationalizers, we focus on new businesses excluding spin-offs.

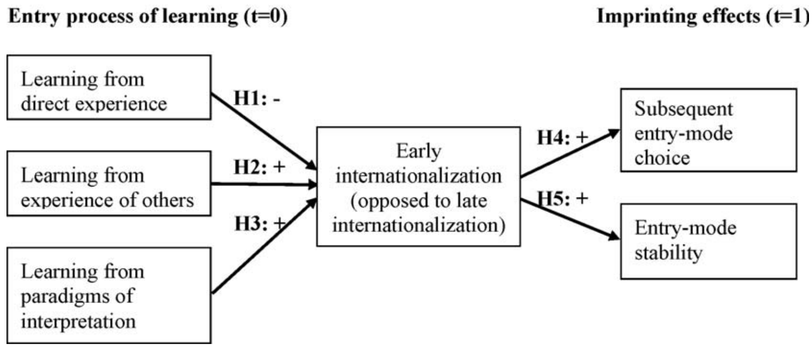

Fig. 1. The entry process of learning and subsequent imprinting effects of early (opposed to late internationalization).

Harrison (1991) also support the assertion that there is a significant trade-off between using both internal and external learning and leveraging both is difficult. Venturing into a foreign market is basically an innovative process. Late internationalizers are more likely to apply direct learning as they acquire greater competency, a more experienced workforce, experience in the industry, and established routines, all of which promote dealing with trajectories through direct learning (Gopalakrishnan & Bierley, 2006; March, 1991; Sorenson & Stuart, 2000; Stinchcombe, 1965). Thus, although the different types of learning are not at all mutually exclusive, prior research supports the belief that firms may apply either learning method. Forsgren (2002) points at the role of using networks and imitation, which firms often apply as alternative learning types, rather than direct learning to reduce liabilities of foreignness. He relates these different types of learning in particular to rapid internationalization, which supports our view of entry learning of early internationalizers.

In addition to elaborating entry learning behavior, our work examines the imprinting effects of early internationalization on subsequent entry-mode choice and entry-mode stability in the same foreign market. As learning is a history-dependent process, early internationalizers opposed to late internationalizers may continue to internationalize by choosing more cooperative modes rather than establishing wholly owned foreign subsidiaries in the same foreign market. Embeddedness into a network is a key characteristic of early internationalizers, guaranteeing a creative and flexible knowledge-acquiring environment from which they may capitalize to achieve sustainable firm growth (Oviatt & McDougall, 1994, p. 57). In contrast, late internationalizers strive for a more traditional growth pattern during which scale, efficiency, and replication (Rastogi, 2003) dominate. This will lead to increased foreign market commitment culminating in wholly owned foreign subsidiaries guaranteeing a high degree of control.

Further, by capitalizing on external knowledge acquisition, early internationalizers may be less inclined to switch their first chosen entry-mode. In contrast, late internationalizers desire greater foreign market commitment to achieve efficiency and scale, showing a higher propensity to choose wholly owned subsidiaries as a final stage of their internationalization process. They may be more likely to change the first chosen entry-mode, resulting in a lower degree of initial stability. Thus, we agree with Cohen and Levinthal (1990, p. 137), who posit that organizations in a better position to acquire external knowledge – which is key characteristic for early internationalizers – "[...] will tend to be more proactive, exploiting opportunities present in the environment [...]". Our position is also in line with Gullién (2002, p. 513), who claims that "[o]lder organizations will not respond to their peers' actions and experience as readily as younger ones because structural inertia leads them to believe that what they do is correct or irrelevant to them."

Fig. 1 shows our research model including the entry learning behavior of early and late internationalizers (left) and the subsequent imprinting effects of early and late internationalization on entry-mode choice and entry-mode stability in the same country (right).

4. Hypotheses

4.1. Learning from direct experience

According to Johanson and Vahlne (1977, 1990), firms accumulate knowledge in an incremental manner. "The model focuses on the gradual acquisition, integration and use of knowledge about foreign markets and operations, and on the incrementally increasing commitments in foreign markets" (Johanson & Vahlne, 1977, p. 23). Direct experience is gained by gradually increasing commitments to the foreign market. A higher degree of knowledge about the market and a more solid and stable domestic market decreases the perceived risk of the firm for overall company failure. "The firm postpones each successive step into a certain market until the perceived risk associated with the new investment is lower than the maximum risk" (Forsgren, 2002, p. 259). Establishing a stable domestic market first is part of this risk-averse strategy. Thus, learning from direct experience plays a major role for a firm's internationalization behavior. Late internationalizers appear to follow an internationalization process according to this model. Having the necessary resources and knowledge to collect and integrate knowledge and experience over time, late internationalizers expand from domestic to foreign markets in an incremental manner. Thus, gradual learning from direct experience is of major importance for their internationalization behavior making rapid foreign market entry less likely as the process is quite time-consuming. Late internationalizers "[...] are more likely to build on their previous knowledge bases via local search, extending their past [...] trajectories" (Gopalakrishnan and Bierley, 2006, p. 6).

In contrast, early internationalizers enter foreign markets shortly after the company's foundation. Due to a lack of experience and the absence of a stable domestic market which might endanger firm survival, early internationalizers need to utilize mechanisms that enable them to enter foreign markets early in their lifecycle. Accumulating own knowledge over time is a time-consuming process, which impedes rapid internationalization. If the learning behavior of a firm is largely based on learning from direct experience, the probability for early internationalization is rather limited. If, however, internationalization does not depend on learning from direct experience, the possibility to internationalize from inception is higher. Consequently, the extent of learning from direct experience constitutes a major (adverse) predictor for the appearance of early internationalization.

H1. The more intensive the learning from direct experience, the lower the likelihood of early internationalization as opposed to late internationalization.

4.2. Learning from experience of others

Access to networks provides learning opportunities about foreign markets without gaining own experiential knowledge (Kale, Singh, & Perlmutter, 2000). Although networks may facilitate internationalization in general, making use of network contacts has different value for early and late internationalizers. Early internationalizers are more dependent on and proactive in exploiting network contacts to substitute their lack of own knowledge in the entry phase (Schwens, 2008).

According to Greve (2005, p. 1028), "an organization's susceptibility to learn from others is determined by its motivation and capability." Concerning motivation, learning theory (Cyert & March, 1963) suggests that scant resources increase search activities for third party resources and knowledge. Exploiting knowledge from network partners helps an early internationalizer to overcome liabilities of foreignness. There has been a stream of research supporting the argument that inter-organizational learning in business relationships allows for acquiring even tacit knowledge from the different actors in the network (Andersson, Forsgren, & Pedersen, 2001; Eriksson et al., 1998; Lane & Lubatkin, 1998; Uzzi, 1996).

Forsgren (2002, p. 264) supports the argument that learning from others stimulates rapid and early internationalization stating that, "[m]arket-specific, tacit knowledge can be acquired through interaction with other organizations, which, in the context, also means that the prediction that internationalization is a slow process may not always hold true." Thus, we argue that early internationalizers are more likely to learn from the experience of others, whereas late internationalizers prefer to develop knowledge about the focal market based on their direct experience. Hypothesis H2 summarizes our arguments.

H2. The more intensive the learning from experience of others, the higher the likelihood of early internationalization as opposed to late internationalization.

4.3. Learning from paradigms of interpretation

Next to substituting direct experience by network knowledge, early internationalizers compared to late internationalizers may more likely learn from paradigms of interpretation. In order to overcome liabilities of foreignness, entrepreneurial entrants imitate focal organizations which they perceive as best practice companies in the foreign market. By trying to organize their routines according to these benchmark firms, early internationalizers adapt organizational practices that fit the host country environment (Aldrich, 1999; Levitt & March, 1988). "For instance, it has been argued that organizations tend to imitate actions that have been taken by a large number of organizations, because such practices are legitimized, or their success is taken for granted" (Forsgren, 2002, p. 264).

Referring to authors like Meyer and Rowan (1977) or Scott (1987), organizations not only have to be efficient; they must also be legitimated. Legitimacy can be acquired by adopting structural elements that socially constructed environments regard as rational (DiMaggio and Powell, 1991; Fligstein, 1985; Haunschild & Miner, 1997; Haveman, 1993; Kraatz, 1998; Zucker, 1987). Thus, early internationalizers imitate those organizations in the target market that they perceive to be successful. Through mimetic isomorphism, early internationalizers tend to become similar to those organizations, reducing liability of foreignness and risk of foreign market entry (Scott and Meyer, 1992). Such a learning pattern is specifically catered to the dominant legitimized routines in the specific country market. It may be that routines that fit one country market can be transferred to other markets; however, this may only be possible between markets with a small psychic distance.

Learning from paradigms of interpretation may be a particular learning mechanism for early internationalizers rather than for late internationalizers. This is supported by Forsgren (2002, p. 264) outlining the possibility for early internationalizers to learn by imitating legitimized routines. "[...] By imitating other organizations with a high degree of legitimacy, the firm can reduce its perceived uncertainty about the foreign market without having to wait until its own market-specific knowledge has reached the required level. Internationalization itself can be seen as a legitimacy creating activity that will stimulate other firms to invest abroad much earlier than they would otherwise have done." Summarizing the argument, imitation of best practice companies seems to be another mechanism to substitute direct learning as it reduces the risk of foreign market commitment and allows more likely for early internationalization compared to late internationalization.

H3. The more intensive the learning from paradigms of interpretation, the higher the likelihood of early internationalization as opposed to late internationalization.

4.4. Subsequent entry-mode choice

The literature on internationalization accounts for different types of foreign market entry choice, regularly distinguishing between hybrid modes of market penetration (such as joint ventures and other forms of cooperative market entry) and wholly owned subsidiaries (Brouthers, 2002; Brouthers & Brouthers, 2003; Brouthers & Hennart, 2007; Brouthers & Nakos, 2004; Slangen & Hennart, 2008).

Early internationalizers, having improved competence by substituting the experience of others for direct experience, may continue to learn from others, and thus may cater to hybrid entry modes in the subsequent internationalization phase in the same market. In contrast, late internationalizers may pursue a more traditional growth path capitalizing on their experience and resource endowment for sustainable company development ending up by establishing a wholly owned subsidiary. This may guarantee a high degree of control and internalization of transactions.

As learning is a history-dependent process, in which prior related knowledge feeds into present and future actions (Cohen & Levinthal, 1990; Levitt & March, 1988; March, 1991), we argue that early internationalizers may continue to learn from others in the process of internationalization. This view is supported in the seminal framework by Oviatt and McDougall (1994). In this framework network structures are not only one of the key elements for the establishment of an early internationalizer, but also key for a sustainable international new venture over time. "Network governance structures [is a major] condition [for early internationalization] that may limit the expropriation of venture knowledge. Although alliances with complementary organizations [. . .] risk expropriation, the network structure itself tends to control the risk" (Oviatt & McDougall, 1994, p. 57). Spence (2004) and Loane, McNaugthon, and Bell (2004) support this view, observing that early internationalizers use networks continuously over time as a means for sustainable growth and expansion in foreign markets.

According to Stinchcombe (1965), a firm is imprinted by the social and cultural environmental conditions existing at its founding. Thus, the learning behavior a firm applies at inception may develop as a key competitive edge enabling subsequent internationalization. This is supported by Cohen and Levinthal (1990, p. 136), who posit that "[a]ccumulating [knowledge] in one period will permit its more efficient accumulation in the next. By having already developed some expertise in a particular area, a firm may more readily accumulate what additional knowledge it needs in the subsequent periods in order to exploit any critical external knowledge that may become available." Whereas scale, efficiency, and replication (Rastogi, 2003) are key for the expansion of late internationalizers, early internationalizers' "[. . .] organization design, [..] has to remain flexible, fluid and temporary to foster creativity, knowledge, and agility, which are the catalysts of [their] wealth creation" (Spence, 2004, p. 66). Therefore, early internationalizers are more likely to continue to choose hybrid modes of market penetration in the subsequent internationalization process in the same country, whereas late internationalizers are more likely to choose foreign wholly owned subsidiaries in order to internalise transactions and to possess a higher degree of control over transactions. This reasoning leads us to the following hypothesis:

H4. Compared to late internationalizers, early internationalizers are more likely to choose hybrid modes of market penetration (instead of wholly owned subsidiaries) in the subsequent process.

4.5. Entry-mode stability

Besides preferring cooperative modes of market penetration for subsequent international business, the learning behavior of early internationalizers may also result in a lower propensity to switch the first chosen entry-mode in the foreign market. Early internationalizers may not change their first chosen entry-mode as early as late internationalizers do. They may be more stable in their choice of entry-mode.

Late internationalizers work by trial and error in order to accumulate their own knowledge over time, capitalizing on scale, efficiency, and replication (Rastogi, 2003). To reach scale and efficiency, late internationalizers develop their international markets further along the establishment chain. For them, a continuous adaptation of entry-mode is part of the internationalization strategy. This process of market commitment and generation of knowledge necessitates continuous adaptation of entry-mode.

On the other hand, to remain competitive over time, embeddedness into a network structure is a key element for early internationalizers (Oviatt & McDougall, 1994). Capitalizing on an efficient network structure, early internationalizers learn from others right from inception in order to be able to venture into a foreign market. This way, early internationalizers generate knowledge, guaranteeing a flexible and creative environment for knowledge development. The entry learning pattern adopted by an early internationalizer becomes a distinguishing organizational characteristic in subsequent internationalization (Oviatt & McDougall, 1994), resulting in higher sustainability of decisions as well as stability in the mode of market penetration. Thus, due to their organizational culture and competitive edge of a creative, knowledgegenerating and flexible firm (Oviatt & McDougall, 1994), early internationalizers have a lower propensity to switch entry-mode during subsequent foreign market penetration than late internationalizers. This leads us to the following hypothesis:

H5. Compared to late internationalizers, early internationalizers are less likely to change their first chosen entry-mode in the subsequent foreign market penetration.

5. Methods

5.1. Data

Our empirical analyses are based on data collected from German medium-sized companies via standard postal survey. Using the "Hoppenstedt" enterprise directory of the year 1999, the total population of German medium-sized companies was identified, resulting in 4229 companies with international business activity. In the end of 1999, standardized questionnaires were sent to all 4229 medium-sized companies, resulting in a return of 449 questionnaires (10.6%). Due to missing variables and the necessity to include only firms that had changed their entry-mode over time in the same international market, 269 companies remained for our analysis.

In order to differentiate between early and late internationalizers, we applied a rigid definition of early internationalizers as companies internationalizing during the first year after inception. There has been an ongoing debate in the literature of the field of international entrepreneurship about which cut-off point best represents the phenomenon of early internationalization. Cut-off points vary from three years (Knight & Cavusgil, 1996), over six years (Shrader, 1996), to ten years after firm inception (Burgel & Murray, 2000). As our focus is explicitly on the timing of foreign market venturing and not on the volume of internationalization as it is in many other definitions, we decided for a strict classification, which is closely related to the original definition as set by Oviatt and McDougall (1994), defining early internationalizers as firms venturing into foreign markets from inception. Further, we have chosen such a rigid classification of internationalization within the first year after firm establishment as it best represents the scant resources that early internationalizers and entrepreneurs assemble. The choice of the cut-off point is also in line with definitions applied by other researchers in the field (e.g. Brush, 1992).

Applying this classification split our sample of 269 internationally acting medium-sized companies into 32 early internationalizers and 237 late internationalizers.[5] The time lapse between the survey and the internationalization of the firm was minimum 0 years, maximum 29 years and on average 8.9 years with a median of 6 years. Applying retrospective recall in our survey, the obvious disadvantages of such a method necessitate further comments. In organizational research, retrospective reports have been used extensively to study strategic decision making processes (Bourgeois & Eisenhardt, 1988; Mintzberg, Raisinghani, & Throret, 1976). The primary problem is that key informants may not be able to accurately recall the past. As Golden (1992), Huber and Power (1985), Wolfe and Jackson (1987), and many others have suggested, inaccurate recall in retrospective reporting can result from inappropriate rationalization, oversimplifications, faulty post hoc attributions, and simple lapses of memory. Asking for the first year of internationalization there could be a problem in remembering due to the age of some of the companies in our data. However, our sample includes a significant number of family businesses (~79%). As we addressed the questionnaire to the top management, the likelihood that the CEO was involved in the first internationalization decision making processes was high. Particularly in family businesses, the CEO is often closely related to the founder of the firm or established the company himself. This may significantly reduce the risk of informant fallibility (Golden, 1992; Miller, Cardinal, & Glick, 1997), and leads to higher retrospective accuracy. 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, aware of the disadvantages of retrospective recalls we agree with Miller et al. (1997, p. 194) that "[t]he reliability of any methodology is not perfect. [...] even if retrospective recall of strategic actions is perfect, a questionnaire assessment will not yield a perfect retrospective accuracy coefficient."

5.2. Measurement

Table 1 provides an overview of the measurements of our study. Independent variables were mainly collected using 5-Point Likert-scaled items. To measure learning from direct experience we adapted a three-item scale established by Yli-Renko, Autio, & Tontti (2002), asking about own learning facilitating foreign market knowledge acquisition (Cronbach's α = .807). Learning from experience of others was measured with a three-item scale (adapted from Burgel & Murray, 2000; Ellis & Pecotich, 2001), asking about the degree to which network partners facilitated foreign market knowledge acquisition

[5] We conducted a robustness test including cut-off points at two, six and ten years after inception. The results of the robustness test showed that the longer the elaspsed time period between firm inception and first internationalization actions, the more the firm applied learning from direct experience in order to reduce liabilities of foreignness and the weaker the effects for learning from experience of others and learning from paradigms of interpretation. This is in line with our argument, suggesting that lacking experienced workforce and lacking knowledgeable management teams urge early internationalizers to learn from external sources instead of direct learning. Resources availability in terms of e.g. workforce experience increases over time of activity on the domestic market leading to a lower necessity for early internationalizers to learn from others and to learn from paradigms of interpretation.

Table 1
Measurement of the dependent and independent variables.

Variable	Measurement
Early internationalization	Dichotomous (1 = internationalization within the first year of foundation; 0 = internationalization after the first year)
Entry-mode choice	Dichotomous (1 = contractual or equity joint-venture; 0 = wholly owned subsidiary)
Entry-mode stability	Number of years between first chosen entry-mode and second mode of market penetration in the same country (metric)
Learning from direct experience (5-Point Likert scales; Cronbach's α = .807)	"Extent to which the firm acquired knowledge about the foreign market through own market analyses" "extent to which the firm acquired knowledge about the foreign market through own site analyses" "extent the to which the firm acquired knowledge about the foreign market through collecting own market information"
Learning from the experience of others (5-Point Likert scales; Cronbach's α = .631)	"Extent to which the firm acquired knowledge about the foreign market from business partners" "extent to which the firm acquired knowledge about the foreign market from customers" "extent to which the firm acquired knowledge about the foreign market from suppliers"
Learning from paradigms of interpretation (5-Point Likert scales; Cronbach's α = .650)	"Extent to which the firm acquired knowledge about the foreign market through imitating a host country firm's structure" "extent to which the firm acquired knowledge about the foreign market through imitating firms perceived as best practices" "extent to which the firm acquired knowledge about the foreign market through imitating dominating modes of penetration"
Company size (log)	Number of employees (logarithm)
Family business	"Is your company a family enterprise or is the majority of capital owned by one family or entrepreneur respectively" (dichotomous)
Motive: Access to foreign market	"Motive underlying foreign market entry: access to foreign markets" (5-Point Likert scale)
Motive: Access to know-how	"Motive underlying foreign market entry: access to know-how" (5-Point Likert scale)
Motive: Following customers	"Motive underlying foreign market entry: following customers" (5-Point Likert scale)
Cultural distance	Index for cultural distance (developed by Kogut & Singh, 1988)
Political constraint	Index for political uncertainty (developed by Henisz, 2002)
Intellectual property rights	Index for property rights protection (developed by Parke & Ginarte, 1997)

(Cronbach's α = .631). We measured learning from paradigms of interpretation by conceptualizing a three-item scale (adapted from Haunschild, 1993) asking about the degree to which imitating foreign market best practices facilitated the foreign market knowledge acquisition (Cronbach's α = .650). As the Cronbach's α values for learning from experience of others and learning from paradigms of interpretation are slightly below .7 we tested the inter-item correlations (MIC) to evaluate if this is problem. For learning from experience of others the MIC value was .32 and for learning from paradigms of interpretation the MIC value was .28. An additional item can be assumed to increase Cronbach's α if the MIC value is between .2–.4 (Briggs & Cheeks, 1986; Carmines & Zeller, 1979). Thus, we do not assume a reliability problem with these two variables.

The (first) dependent variable, early internationalizers, was measured using a dichotomous item, differentiating between companies internationalizing in the year of foundation and companies internationalizing in later years (Early internationalizers coded as "1"; Late internationalizers coded as "0"). We asked companies about the year of foundation and their first year of internationalization. The (second) dependent variable, subsequent entry-mode choice, was also measured differentiating between companies that chose cooperative post-entry foreign market penetration modes in the same country (contractual or equity joint ventures coded as "1") and companies that chose a wholly owned subsidiary (coded as "0") as the second foreign market penetration-mode in the same market. The (third) dependent variable, entry-mode stability, was measured by the number of years between the first chosen entry-mode and the second mode of market penetration applied in the same market (metric variable).

In addition to the hypotheses about learning from direct experience, learning from others and learning from paradigms of interpretation, we controlled for several factors that may have affected the internationalization process of the firms.

As the resource endowment of the firm plays a particular role in our discussion, we included firm size, which is often considered as a proxy for resources availability. Studying a sample of small and medium-sized international firms, we decided to control for whether the firm was a family business or not. In family businesses strategic decisions such as the international venturing ambitions of a firm are to a large extent influenced by family members. Furthermore, we included different motives for foreign market entry in the statistical analyses. The impact and structure of motives is supposed to play a major role for internationalization (e.g. Tatoglu, Demibrag, & Kaplan, 2003; Williams, 1992). Many discussions in the field of international entrepreneurship circle around the issue that early internationalizers pursue a proactive approach to venture abroad as opposed to late internationalizers, which are more reactive in their strategic internationalization decisions. Therefore, we included "access to foreign market", "access to know-how", as well as "following customers" as control variables to find out to what extent the internationalization decision was more proactively or reactively motivated. Moreover, we included a number of environmental variables. In order to display technological uncertainty we included the intellectual property rights index developed by Parke and Ginarte (1997). Technological intensity and knowledge diffusion play a major role in the scientific discussion about internationalization of firms. Empirical results according to whether a high degree of knowledge intensity furthers or postpones the internationalization decision are so far diverse. In order to control for cultural uncertainty, we included the cultural distance index by Kogut and Singh (1988). The political constraint index (Henisz, 2002) was included to control for political uncertainty.

Looking at the correlation coefficients in Table 2, no serious risk for multicollinearity exists (Anderson, Sweeney, & Williams, 1996). All correlations stay below .7. Further, we calculated the variance inflation factor values (VIF) to test for how

Table 2

Means, standard deviations and correlations among dependent and independent variables.

	Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Early internationalization	.1147	.3192													
2	Entry-mode choice	.5109	.5007	−.053												
3	Entry-mode stability	8.138	8.256	.084	.144*											
4	Learning from direct experience	2.75	.777	−.088	−.001	−.043										
5	Learning from experience of others	2.62	.739	.085	−.110†	−.043	.433**									
6	Learning from paradigms of interpretation	2.34	.723	.039	.124*	−.021	.259**	.198								
7	Family business	1.21	.410	.228**	−.088	−.060	.061	.060	−.075							
8	Motive: Access to foreign market	3.56	.775	.046	−.118	.023	.079	.336**	.094	−.009						
9	Motive: Access to know-how	1.86	.908	−.092	−.160**	.044	.157**	.284**	.181*	.068	.196**					
10	Motive: Following customers	1.75	1.055	.052	−.149*	−.154*	.106	.146*	.262**	.096	.070	.125*				
11	Company size (# employees (log))	5.727	.8157	−.103	.068	−.035	.089	−.027	.146*	−.135*	−.141*	−.059	−.052			
12	Cultural distance	1.199	1.078	.060	−.152*	−.103	.008	−.125**	−.061	−.049	−.082	−.099	.185**	.006		
13	Political constraint	.3663	.1615	−.117	−.010	−.005	.047	.233***	.095	−.073	.162**	.066	−.083	−.103	−.410**	
14	Intellectual property rights	2.904	8.521	−.140*	−.105	.180***	−.005	.132*	.078	.056	.310**	.158*	−.013	−.141	−.364**	.512**

Mean = mean value; S.D. = standard deviation.

* $P \leq .05$.

** $P \leq .01$.

*** $P \leq .001$.

Table 3
Model 1.

	Model 1a: Early internationalization	Model 1b: Early internationalization
Constant/threshold	−.956	−1.363
Motive: Access to foreign market	.723*	.467*
Motive: Access to know-how	−.506*	−.669**
Motive: Following customers	.009	−.155
Company size (# employees (log))	−.404	−.523
Family business	1.461***	2.273***
Cultural distance	−.121	.054
Political constraint	−1.245	−2.168
Intellectual property rights	−.659*	−.620*
Learning from direct experience		−1.038**
Learning from experience of others		1.057**
Learning from paradigms of interpretation		.770**
R^2 (Nagelkerke)	.198	.296
Significance	.000	.000
N	269	269

* $P \leq .05$.
** $P \leq .01$.
*** $P \leq .001$.

much the values of the coefficients are increased due to collinearity. Our analyses for the relevant variables show several VIF values with the highest value of 1.651, thus showing no risk for multicollinearity (Allison, 1999).

As the measures applied in our study are self-reported and collected from an identical source, there could be a problem of common method bias, in which a bias in the source might contaminate all measures in the same direction. Thus, in order to examine the extent of common method bias in our data we followed Podsakoff and Organ (1986), using Harman's one-factor test. We executed a principal component factor analysis based on the variables of interest. This analysis revealed four factors with an eigenvalue > 1, which together account for 38.9% of the total variance. The presence of several factor loadings, combined with the relatively low percentage of the first and second factor – only 17.3% and 11% respectively – indicate that the data do not suffer from common method variance. A substantial amount of common method variance is present, either if a single factor will emerge from the factor analysis, or if one general factor will account for the majority of the covariance among the variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Podsakoff & Organ, 1986). Finally, we calculated Cook's D (Cook, 1979), resulting in no need to eliminate cases that potentially distort the model (cut-off $4/n$).

Controlling for non-response bias, we compared the firms that responded immediately with those firms that responded at the end of the survey, assuming that the late respondents are similar to those companies which did not respond at all. However, the test for non-response did not show significant differences between early and late respondents, suggesting that there is no problem of non-response bias in our study (Oppenheim, 1992).

For testing the hypotheses, we set up three different empirical models. The first binary logit model with the dependent variable "Early internationalization" tests the impact of the three types of learning on the likelihood of early internationalization (Hypotheses H1–H3). The second binary logit model with the dependent variable "Entry-mode choice" (Hypothesis H4) tests the impact of early internationalization on the likelihood of subsequently setting up a cooperative mode of market penetration (instead of a foreign wholly owned subsidiary) in the same foreign market. The third linear regression model with the dependent variable "Entry-mode stability" (Hypothesis H5) tests the impact of early internationalization on the likelihood of subsequently switching the first-chosen entry-mode in the foreign market. Tables 3 and 4 show the empirical results of the three models.

5.3. Empirical results

A significant negative association between learning from direct experience and early internationalization could be shown, thus supporting Hypothesis H1, which assumed that learning from direct experience reduces the likelihood of early internationalization opposed to late internationalization. As suggested in Hypothesis H2, learning from experience of others is significantly positive with regard to early internationalization. Early internationalizers compared to late internationalizers substitute lack of experience by accessing knowledge from other firms. Hypothesis H3 proposes a significantly positive association between learning from paradigms of interpretation (imitation of benchmark firms in the focal market) and the likelihood of early internationalization opposed to late internationalization. Our empirical results from model 1 support this relationship. Early internationalizers learn by substituting their lack of experience by learning from experience of others and by learning from paradigms of interpretation such as best practice firms.

Looking at the control variables, we see a significant positive association between the motive "access to market" and early internationalization. Early internationalizers, or their management team respectively, have a global vision with an emphasis on foreign market development which encourages early and rapid internationalization. The association between "access to know-how" and early internationalization is negatively significant, indicating that access to know-how seems to be a rather long-term approach not advantageous in early internationalization. Family businesses show a significantly higher

Table 4
Models 2 and 3.

	Model 2a: Entry-mode choice (binary logit)	Model 2b: Entry-mode choice (binary logit)	Model 3a: Entry-mode stability (linear regression)	Model 3b: Entry-mode stability (linear regression)
Constant/threshold	−4.263	−4.615	11.586	10.490
Learning from direct experience	−.199	−.145	.060	.364
Learning from experience of others	.408†	.354	−.359	−.685
Learning from paradigms of interpretation	−.949***	−1.006**	.203	.060
Family business	.336	.206	−1.787	−2.562†
Motive: Access to foreign market	−.042	−.055	.062	.049
Motive: Access to know-how	.537**	.581**	.301	.533
Motive: Following customers	.410*	.412**	−1.175**	−1.149**
Company size (# employees (log))	.049	.200	−.372	−.035
Cultural distance	.617***	.627***	−.605	−.591
Political constraint	.860	.958	−.937**	−.955*
Intellectual property rights	.672**	.741***	2.324**	2.599***
Early internationalization		.746*		4.017**
(adjusted/pseudo) R^2	.263	.273	.050	.064
Significance	.000	.000	.006	.004
N	269	269	269	269

* $P \leq .05$.
** $P \leq .01$.
*** $P \leq .001$.

probability of early internationalization, whereas intellectual property rights protection decreases the probability of early internationalization. Companies at risk of intellectual property rights violation move early into international markets as their competitive edge is rooted in technological leadership. It is not patents that protect against unintentional dissemination of knowledge but continuous technological progress and being first to the market.

Our results from model 2 support Hypothesis H4, which assumes that early internationalizers compared to late internationalizers continue to apply cooperative entry-modes rather than establishing wholly owned foreign subsidiaries in the post-entry phase in the same foreign market. This necessitates further comments. It could be argued that early internationalizers continue to choose hybrid modes, because they lack resources to establish foreign-owned subsidiaries. However, due to significant growth patterns, early internationalizing firms in our dataset seem to have generated significant resources over time. Comparing the number of employees in the dataset, which is often considered as a proxy for resources availability, we can see that early internationalizers compared to late internationalizers possess a higher resource endowment at the timing of data collection.[6] Therefore, the idea that early internationalizers choose hybrid modes due to scant resources needs to be rejected. Early internationalizers continue to apply cooperative modes of learning as a creative and flexible organizational culture develops over time, as proposed by Oviatt and McDougall (1994).

Imitation of best practices is negatively related to hybrid entry-modes in subsequent international business. As indicated before, paradigms of interpretation are rooted in imitation of best practice companies without the need for establishing cooperative ties. The motive "following customers" is positively related to post-entry cooperation. If a customer has initiated internationalization, firms may try to follow these customers by substituting lack of own knowledge by cooperation with others in the focal market. Companies looking for "access to know-how" through internationalization also prefer hybrid modes in subsequent foreign market penetration. Further, cultural distance shows a positive association with the choice of post-entry cooperation. The higher the cultural distance of a foreign market the higher the internationalization barriers and risks. To handle these risks, firms may choose more cooperative arrangements rather than wholly owned subsidiaries. Intellectual property rights protection is positively associated with hybrid modes of foreign market penetration. If intellectual property protection in a foreign market is fairly sound, risk of unintentional dissemination through cooperation is less likely (or at least strategies against violations may be strengthened).

Hypothesis H5 suggests that early internationalization compared to late internationalization decreases the likelihood of changing the first chosen foreign market entry-mode in the subsequent internationalization phase. Our results in model 3 support this hypothesis. Early internationalization is positively associated with subsequent entry-mode stability.

Concerning control variables, we see that the motive "following customers" is negatively associated with subsequent entry-mode stability. This may be explained by the fact that such internationalization behavior necessitates continuous adaptation to organizational changes of the customer (and not only by the company itself). Political uncertainty, measured by the political constraint index, is negatively related to entry-mode stability, suggesting a higher probability of entry-mode

[6] Early internationalizers had a higher resource endowment at the time of our data collection, which suggests that they had undergone significant growth compared to late internationalizers. At the time of foreign market entry they had been characterized by resource scarcity due to their young firm age (<1 year) and due to the fact that they were all founded as new firms and not as spin-offs.

change due to volatility of the political environment. Intellectual property rights have a positive influence on entry-mode stability. This shows that patents (if enforceable) provide a certain security and immunity to a firm, making strategic and organizational adaptation less necessary.

6. Discussion and implications for future research

Although learning plays a pivotal role in the seminal work by Oviatt and McDougall (1994), empirical studies elaborating aspects of learning in the field of international entrepreneurship are largely missing. We address this deficit by examining the process of learning in the entry phase of internationalization as well as examining its subsequent imprinting effects. Our empirical results show that learning from direct experience is negatively related to early internationalization opposed to late internationalization, whereas learning from others and learning from paradigms of interpretation have a positive impact on early internationalization opposed to late internationalization. Furthermore, our results illustrate that early internationalizers compared to late internationalizers continue to prefer cooperative modes of market penetration and show higher stability of mode choice in the same market.

Thus, we make several contributions to the research field. Knowledge about learning mechanisms utilized by early internationalizers as opposed to late internationalizers has been limited (Zahra, 2005). Differentiating between learning from direct experience, learning from experience of others and learning from paradigms of interpretation opens up the discussion of learning mechanisms and the impact of learning on internationalization. Building on learning theory by Levitt and March (1988) as well as by Cohen and Levinthal (1990) has proven worthwhile for the analysis of early and late internationalization. By examining subsequent mode choice and stability we show that early internationalization has an imprinting effect on subsequent internationalization behavior. Until now, studies elaborating the imprinting effect of early and late internationalization have been largely absent in the field (Autio, 2005, p. 12).

As it is the case for most empirical studies, limitations also apply to our study. In particular, a more differentiated analysis of the position of the company within the network may provide important insights which have not yet been addressed. A more in-depth intra-network analysis (Burt, 1992), or an analysis of social capital reasoning addressing power and exchange (Coleman, 1988), could supplement our reasoning and increase our understanding of the network utility for early internationalizers. More in-depth knowledge about learning in the post-entry phase is undoubtedly necessary in order to gain an understanding of the development of core competencies and the pace of subsequent internationalization behavior. We still know very little about how early (as opposed to late) internationalization behavior impacts the survival of a firm. Sapienza et al. (2006) have made a first attempt to research this area. However, empirical testing is still largely missing. Future research needs to provide for more in-depth post-entry evidence.

Based on the empirical results, we can deduce first managerial implications from our study. Results show, that in particular for firms venturing into foreign markets early in their lifecycle, networks and imitation form a worthwhile mechanism to overcome resource constraints and to manage liabilities of foreignness. The founder of a firm needs to develop a network which complements the firm's abilities by drawing on the experience of other firms. For entrepreneurs aiming at the establishment of a sustainable and successful business, venturing into foreign markets early on in the firm's lifecycle is a risky endeavour. However, it provides potential for successful future growth as well. As our results illustrate, it is worthwhile to internationalize early in the lifecycle, as firms which internationalize early possess learning advantages by virtue of their newness. These in turn help a firm to better adjust to a foreign market's prerequisites, resulting in more stable internationalization. Early internationalization may not only lead to higher performance in the foreign market; it may also help to acquire new knowledge valuable for activities in the domestic market of a firm. Thus, internationalization is not a trade-off as one might assume at first glance, but may be complementary to the activities of a firm in its domestic market.

However, early venturing into foreign markets also exposes a firm and its management team to fundamental risks, which can even lead to failure and mortality of the company. Our results show that even if the perceived risk of going abroad is initially lower than the perceived risk of not going abroad, a new venture needs to identify mechanisms helping to overcome disadvantages it may encounter due to resource scarcity. Therefore, management teams pursuing an early internationalization strategy should consider acquiring highly experienced managers already possessing a certain amount of knowledge about the target market in order to reduce liabilities of foreignness and to acquire access to networks.

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