

Knowledge Gaps

The Case of Knowledge about Foreign Entry

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Knowledge Gaps: The Case of Knowledge about Foreign Entry

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Knowledge Gaps: The Case of Knowledge about Foreign Entry

Abstract

The study explores what factors influence the reduction of managers' perceived knowledge gaps in the context of the environments of foreign markets. Potential determinants are derived from traditional internationalization theory as well as organizational learning theory, including the concept of absorptive capacity. Building on these literature streams a conceptual model is developed and tested on a set of primary data of Danish firms and their foreign market operations. The empirical study suggests that the factors that pertain to the absorptive capacity concept – capabilities of recognizing, assimilating, and utilizing knowledge - are crucial determinants of knowledge gap elimination. In contrast, the two factors deemed essential in traditional internationalization process theory – elapsed time of operations and experiential learning – are found to have no or limited effect.

Key words: Internationalization, knowledge gap, absorptive capacity, learning box.

Introduction

In many ways a firm's entry into a foreign market takes on the characteristics of an organizational learning process (Andersen, 1993; Cavusgil, 1984; Reid, 1981; Jones, 2000). A firm spots opportunities in one or several new, foreign markets, screens the opportunities, enters the market in order to exploit these opportunities, and adapts the firm's procedures to fit that market and culture. Usually, the operations in the foreign market require extensive adaptation by the entrant firm. At entry (or, after a while, confer Welch and Wiederheim-Paul, 1978; Evans *et al.*, 1992; O'Grady and Lane, 1996), the entrant firm realizes a considerable market discrepancy, i.e. the firm identifies a gap between the knowledge *needed* for doing profitable business in the foreign market and the knowledge *possessed* by the entrant firm. This knowledge gap has implications to the firm's commitment of resources to the targeted, foreign market and to the entry timetable. If the management of the entrant firm conceives a great knowledge gap, resource commitments will be accordingly low, and vice versa (Erramilli, 1991; Pedersen and Petersen, 1998).

The idea of a gradual diminishing knowledge gap resulting in an incrementally increasing resource commitment is pivotal in the traditional theory of firms' internationalization processes (Carlson, 1975; Johanson and Vahlne, 1977; Loustarinen, 1979). The theory presumes the closing of the knowledge gap to be a longwinded process because it takes time to acquire the essential 'experiential knowledge' (Penrose, 1959) without which management will be reluctant to commit irrevocable resources to the foreign market. Hence, the route to firms' high resource commitment to foreign markets (such as the establishment of wholly-owned subsidiaries) goes through learning-by-doing and elapsed time of operations in the foreign market. Strangely little research has addressed this knowledge gap and the factors that influence it.

In this paper we take a closer look at the determinants of knowledge gaps as perceived by foreign entrant firms. We rely on organizational learning theory to examine knowledge gaps and how the level of motivation to close the gap, absorptive capacity of the entrant

firms, timing, and sources of new knowledge impact the knowledge gap. Specifically we address the following: (1) Is the absorptive capacity of the entrant firm critical to the closing of the knowledge gap; (2) Do entrant firms perceive greater value in closing the knowledge gap by experiential, internally generated knowledge or by externally, acquired knowledge? (3) What impact do other factors such as timing, motivation, and past experience have on closing the knowledge gap? To do so, we use primary data of Danish firms and their foreign market operations. We contribute to an updating of internationalization theory that addresses the bridging of knowledge gaps of entrant firms.

Knowledge Gaps

Within learning theory, knowledge gaps are represented as incidents that fosters new learning. Frequently, changing environments, attempting new strategies, advancing technology or decreasing resources can trigger the firm into recognizing that the gap exists. Thus, a gap consists of the recognition that the current knowledge and/or capabilities are not sufficient to maintain performance in the current situation (March, 1999). The discovery of a gap between expectations and reality indicates that new knowledge is needed (Yeung, et. al., 1999). This motives actions to remove or diminish the gap.

Furthermore, March (1999) suggests that when gaps or problems are recognized, the recognition process defines the scope, limits, and boundaries of the gap. Thus this also constructs the attention boundaries for finding the new knowledge needed to fill the gap. However he warns that this can lead to problems of learning myopia such as ignorance of the long run, the larger picture, and overlooking possible future failures. Extending this further to the context of high performing firms, Vaille (1996) suggests that there are three elements that are critical and interacting: these are time, motivation or feelings, and focus.

In the context of entrance into a foreign market, the entrant firm faces the “liability of foreignness” and the prospect of filling the gap between its current experiences and

knowledge and what it needs to know (Hymer, 1960). This is a widely accepted notion and according to traditional internationalization process theory (Johanson and Wiedersheim-Paul, 1975; Johanson and Vahlne, 1977; Loustarinen, 1979; Cavusgil, 1984; Reid, 1981), the closing or narrowing of the knowledge gap of entrant firms is mainly determined by time-consuming, experiential learning. If the entrant firm suffers from learning myopia, it would have a higher probability of not foreseeing the future problems and would undertake the entrance by itself. If the knowledge gap was perceived as being particularly wide, the foreign entrant firm frequently would acquire knowledge externally and minimize the dangers of time and underestimating the difficulties.

Conceptual model

Our model explores the variables and controls that impact the perceived Knowledge Gap in the context of firms entering a foreign market. Traditional internationalization theory explains knowledge gap elimination by two interrelated factors: experiential learning built as a result of past experience and elapsed time of operation in the foreign markets. However, learning/innovation literature adds to the understanding of the two factors (in particular elapsed time), and moreover, has contributions of its own by adding the following dimensions, namely motivation to learn, sources of new knowledge, and absorptive capacity. Altogether, these factors make up a 'learning box', i.e. a platform on which different knowledge gap eliminators are at play. With the decomposing of absorptive capacity into three independent factors – recognition, assimilation, and utilization – the learning box contains seven factors that potentially explain the knowledge gap of managers of entrant firms. Figure 1 shows the conceptual model of the study.

Insert Figure 1 about Here

In the right-hand side of the Learning Box we find the knowledge gap determinants.. Each of the seven factors holds the potential of reducing the knowledge gap in relation to the local business environment (as perceived by the management of the entrant firm). In addition to the Learning Box factors various general firm characteristics (size, age, international experience) may influence the knowledge gap positively or negatively – directly or indirectly.

Factors Affecting the Knowledge Gaps

Absorptive Capacity (ACAP)

Absorptive Capacity represents the capabilities of the entrant firm to *recognize*, *assimilate* and *utilize* new knowledge. *Recognition* refers to firms' capabilities to identify and acquire knowledge that is critical to their operations (Kim, 1997; Clark and Fujimoto, 1991; Zahra and George, 2002). *Assimilation* refers to firms' routines and processes that allow them to analyze, process, interpret, and understand the new knowledge internally generated or obtained from external sources (Kim, 1997; Szulanski, 1996). *Utilization*, or application, of knowledge is an organizational capability that is based on the routines that allows firms "to refine, extend, and leverage existing competencies or to create new ones by incorporating the new knowledge" into their operations (Zahra and George, 2002).. Utilization reflects a firm's ability to harvest and incorporate knowledge into their operations.

H1a: The greater the level of recognition, the small is the perceived knowledge gap.

H1b: The greater the level of assimilation, the smaller is the perceived knowledge gap.

H1c: The greater the level of utilization, the smaller is the perceived knowledge gap.

Experiential Learning

Experiential learning, or learning by doing, results in deep knowledge structures and influences what is retrieved and the ability to use new knowledge. The premise of ACAP is that firms with prior related knowledge will do better at assimilating and using new knowledge, and experiential learning influences a firm's ability to utilize the new knowledge (Tripsas and Gavetti, 2000). Zahra and George (2002) suggest experience

influences “the process by which firms interpret incoming information and act upon it”. Theorists also suggest past experience influences the firm’s capability for retrieving knowledge that has already been created and internalized for use (Lyles and Schwenk, 1992; Lane, Salk, and Lyles, 2000). Thus, learning is cumulative, and learning performance is greatest when the object of learning is related to what is already known. New learning is easiest when it exploits the current knowledge base and extends it.

Reflecting upon these different characteristics, the Uppsala internationalization process theorists (Johanson and Vahlne, 1977; Forsgren and Johanson, 1992) made a distinction between two broad categories of knowledge: (1) knowledge that can be acquired quickly and with relative ease because it is explicit (markets statistics, competition laws, product approval requirements, technical standards, import regulations, etc.) and (2) tacit knowledge that can be acquired mainly through learning-by-doing. According to the Uppsala theorists, since the tacit knowledge is the most indispensable and critical in the internationalization process, they view that the improvement of local market familiarity is contingent upon the extent to which the firms accumulate knowledge through ongoing activities:

“International expansion is inhibited by the lack of knowledge about markets and such knowledge can mainly be acquired through experience from practical operations abroad” (Forsgren and Johanson 1992, p.10).

We expect that firms with extensive experiential learning in foreign markets would perceive a smaller knowledge gap when entering a new foreign market.

H2: The greater the experiential learning, the smaller is the perceived knowledge gap.

Sources of New Knowledge

There are two primary sources of new knowledge that will reduce the size of the knowledge gap (Zahra and George, 2002). The first is through internal sources that builds upon the knowledge base of the firm and contributes to filling the gap. The second

source of new knowledge is external to the firm and is acquired and transferred to the firm. These are not really a dichotomy since a firm's direct experiences will influence its ability to understand and to assimilate the knowledge and experience of others.

Consequently the firm's own insights and current knowledge base influence its ability to adapt and to integrate knowledge acquired from others. Thus in reality both of these sourcing activities are occurring typically at the same time and therefore, are not truly independent but are interdependent and influence the other.

However internally sourced knowledge can often be expensive and time consuming. March (1991) suggests that this type is typically exploiting the firm's current knowledge base and that a firm can improve performance over time by utilizing what is currently known and then reflecting on the results. Epple, Argote, and Devadas (1991) provide examples of an experience curve effect in reducing the cost of the task. At the same time, Leonard (1998) emphasizes that large investments in internally generated knowledge do not always lead to better performance. March (1991) agrees and furthers this by suggesting that exploitation frequently needs exploration of new knowledge and external sourcing in order to develop effective performance.

External sources of knowledge typically come from experts or from other firms with more experiential learning.. When exploitation does not work, exploration may be necessary. Firms typically are aware of what their competitors or others are doing. Sometimes it is possible to source new knowledge simply by copying or studying best practices. Other times it is necessary to actually purchase the knowledge or to hire experts or consultants to help identify the knowledge and to assist in integrating it into the knowledge base of the firm. Research has shown that attempting to transfer and to utilize knowledge that works well for others is difficult because of differences in comprehension levels (Winter and Szulanski, 2001; Leonard, 1998).

In the context of foreign operations and exporting, much of the knowledge gap faced by entrant firms arises from not knowing how business is done in the foreign country. Some of the rules, customs, and practices are explicit and relatively easy to comprehend and adopt. At a deeper level, how the game is played is influenced by the values of the foreign country and by its basic cultural assumptions. These differences tend to be implicit and tacit, and hence harder to uncover. They also are much more

socially imprinted upon the individual, and hence foreigners find differences in values and cultural assumptions much harder to accept than differences in practices (Schein, 1985).

Thus we hypothesize:

H3: The greater that the internal sourcing of knowledge, the smaller will be the perceived knowledge gap.

Elapsed time

Elapsed time of operations in the foreign market is supposed to affect the quality of the learning of the entrant firm. Nonetheless, elapsed time *per se* does not bring about knowledge about foreign markets because if the entrant firm performs no activities in the foreign market, or if activities are restricted by certain organizational routines leaving no room for variation, the learning effect will be close to zero. Representing a new generation of internationalization theorists, Eriksson *et al.* (1998) found that 'time' in itself is strongly correlated with increased international commitment of firms – even more than the conduct of business activities. Without the necessary time available, an entrant firm cannot absorb the experience from its current business activities.

In the same vein, Barkema *et al.* (1996) and Vermeulen and Barkema (2002) submit that learning is inherently incremental, and the speed with which firms expand internationally is subject to diminishing returns. This insight emanates from recent literature on learning in innovation processes. In their study of relationships between firms' profitability and their speed of international expansion Vermeulen and Barkema (2002) builds on Dierickx and Cool's (1989) concept of "time compression diseconomies": the fundamental mechanism of diminishing returns when – everything else equal – the pace of organizational learning processes increases. New business opportunities in foreign markets are detected by firm managers, but these are bounded in terms of their rationality and cognitive scope (Sutcliffe, 1994).

Each new foreign market confronts the management of the entrant firm with new experiences in terms of customers, competitors, cultures, and institutions (Li, 1995). Experience that comes too fast may overwhelm managers, leading to an inability to

transform experience into meaningful learning (Clark and Fujimoto, 1991; Eisenhardt and Martin, 2000). On the organizational level, international expansion requires adaptation of home-grown 'mental maps' which permeate and underpin organizational structures and processes. Such processes are complex and take time to develop (Murtha *et al.*, 1998; Hastings, 1999).

From here, it is easy to make associations to the absorptive capacity of an organization: firms can handle and benefit from new expansion, but the amount of new experience they can absorb and put to commercial use is constrained by time (Cohen and Levinthal, 1990; 1994). Hence, the elapsed time of operation affects the ability of the entrant firm to learn about the foreign market in question.

H4: Greater elapsed time will lead to a greater knowledge gap.

Motivation to Learn

Prior research on facilitating learning has often addressed the motivation to learn or learning intent. Szulanski and Cappetta (2003) identify the importance of the motivation of the recipient as being critical and also that a "not invented here" attitude can be detrimental to a motivation to learn. Lyles and Salk (1997) found that an IJV's capacity to learn is associated with its use of mechanisms like articulated goals and objectives to focus both IJV and foreign-parent managers on the knowledge to be transferred. As mentioned before, absorptive capacity focuses primarily on learning capabilities, and less on motivational mechanisms in learning processes of firms. Zahra and George (2002) argue that ability and potential absorptive capacity are necessary, but not sufficient conditions for learning payoffs - motivation of the recipient firm is also necessary in order to facilitate organizational learning. The ability (*can do*) factor denotes a potential for performing some task, which may or may not be utilized, while the motivation (*will do*) factor reflects intention and drive to recognize, assimilate, and utilize the knowledge.

H5: Greater motivation to learn will lead to a smaller knowledge gap.

Methodology

Data compilation and sample characteristics

The data for this study was gathered through a mail survey, part of the large, international research project “Learning in the Internationalization Process”. The project included researchers from Denmark, Finland, New Zealand, Korea, and Sweden. However, only the data arising from the Danish firms are relevant to our research questions. A pilot study was conducted in 1997 in which ten Swedish managers were asked to answer the questionnaire in an interview situation. The final standardized questionnaire was sent out in August 1998 to all Danish firms that were involved in international operations, e.g. having export or operation subsidiaries abroad. The population comprised 723 firms in various industries (both manufacturing and service firms were included), and with different international locations. This population was chosen due to the active involvement of these firms in foreign operations and their associated transfer of internationalization knowledge.

The questionnaires were mailed to the CEO or other top executives. The number of replies reached 246, resulting in a response rate of 34 percent. For various reasons (e.g. no longer participating in foreign activities), a number of returned questionnaires were unacceptable. After incomplete questionnaires were excluded, a total of 201 replies or a net response rate of 27.8 percent, were usable. A test was conducted to check the sample for possible non-response bias. Regarding size and number of foreign subsidiaries, no statistically significant differences between respondent and non-respondents were found.

Table 1. *Characteristics of the sample (N=198)*

Company characteristics	Mean (1998)	Standard deviation
Total turnover (million DKK)	238 (US\$ 34.5 million)	488

- proportion of sales abroad	42.9 %	31.2 %
Total number of employees	192	419
- proportion of employees abroad	14 %	23 %
No of countries in which the company operates	18	17
Years of export experience	21	18

The average profile of the firms in the sample is shown in Table 2. The average size of the sample is 192 employees in Denmark and abroad, with considerable variation, providing turnover of DKK 238,000,000 (equivalent to US \$34,500,000). One seventh of the personnel is employed outside Denmark and almost half of the average turnover originates from foreign activities. The average firm in the sample is highly internationalized and possesses considerable experience in conducting foreign operations. However, the sample also includes a number of relatively novice exporters.

Measurement of Variables

Respondents were asked to select one recent business venture or operation (e.g. entering a new market, or undertaking a considerable expansion of an existing business). The operation was to be important to the firm and its international expansion. Furthermore, the operation should preferably be well underway in the foreign location.

Knowledge gap was measured as the perceived lack of knowledge in relation to the particular foreign business operation. More specifically, the respondents were asked to indicate the extent to which a lack in certain kinds of local market knowledge constituted an obstacle to the accomplishment of the particular foreign business operation. Following Eriksson et al. (1997), the required foreign market knowledge was of two different kinds: ‘institutional knowledge’ and ‘business

knowledge'. 'Institutional knowledge' consists of knowledge of the institutional framework, rules, norms and values in the particular market. 'Business knowledge' includes knowledge on counterparts (customers, suppliers, distributors, and competitors) in the host country, including knowledge about local business cultures. Respondents were then asked to indicate what extent the lack of various types of knowledge was an obstacle to the completion of the foreign business operation (1 = no obstacle, and 7 = serious obstacle on a 7-point Likert scale):

- Knowledge of business law and rules of the foreign market
- Knowledge of financial practice of the foreign market
- Knowledge of the local business culture
- Knowledge of the products of customers in the foreign market
- Knowledge of the products of suppliers in the foreign market

The Cronbach alpha value for all five items was 0.77. Therefore, we have created a composite index of knowledge gap where all five items are included.

The **Elapsed Time** of operation in the particular foreign market was measured as the number of months and years since the particular international business operation was commenced. In principle, the value of the variable may vary from 1 month to infinite.

Source of New Knowledge was measured by asking the respondent how various knowledge of importance to the focal business venture was provided: was it mainly through the firm's own knowledge base or through purchase from external expert sources? The two alternatives composed the two poles on a 7point Likert scale. On the scale, 1 indicated that the knowledge was acquired through a learning-by-doing process while 7 indicated that the knowledge was acquired through purchase from external sources. The various types of foreign market knowledge included five items: (1) knowledge of business law and rules of the foreign market; (2) knowledge of financial practice of the foreign market; (3) knowledge of the local business culture; (4) knowledge of customers in the foreign market, and (5) knowledge of suppliers in the foreign market. The Cronbach alpha value for all five items was 0.71. Therefore, we have created a composite index of 'experiential learning' in which all five items are included. Recall that

the five types of knowledge for which we have measured sources of knowledge are the same five types of knowledge for which we measured the knowledge gap.

Experiential Learning may make a difference to the knowledge gap if the activities of the focal business operation are carried out in-house or assigned to a local, independent operator. By performing the tasks themselves, the firms are gaining valuable experiential knowledge, and this becomes ingrained into the firm's knowledge base. If the entrant firm does not do the activities itself, it may not perceive an extant knowledge gap if responsibilities are entrusted a local operator – either because the entrant firm does not realize any knowledge gap at all or realizes the knowledge gap, but does not see this ignorance as a hindrance to the completion of the foreign business operation since it is entrusted to a local operator. In order to establish whether or not the focal business operation is 'internalized' and experiential learning is gained, the respondent was asked to tell who was currently responsible for the focal business operation. More specifically, the respondent was asked to tick off one of four modes by which the foreign market operations were carried out: (1) local subsidiary; (2) the organization (HQ) at home (i.e. in Denmark); (3) a local agency; (4) other local operator than an agency – where mode 1 and 2 are categorized as internal (dummy=1) and mode 3 and 4 as external (dummy=0).

Recognition was measured as the extent to which the firm (according to the respondent) in its completion of the business operation would draw on its existing knowledge about: (1) customers in the foreign market; (2) suppliers in the foreign market; (3) business law and rules of the foreign market; (4) financial practice of the foreign market; (5) knowledge of the local business culture. On the 7-point Likert scale used by the respondent, 1 indicated that s/he fully agreed that the firm's existing body of knowledge pertaining to the specific knowledge item was used in the completion of the focal business operation, whereas 7 indicated that s/he completely disagreed. The Cronbach alpha was 0.71 and a composite index of 'recognition' was created based on the five items. Again, we used the same five types of knowledge to measure the recognition.

In order to measure **Assimilation** we asked the respondent to judge to which extent the completion of the focal business operation was impeded by the firm's

lack of adaptability as concerns: (1) the products; (2) the production processes, and (3) business routines. Again, the poles of the Likert scale were ‘fully agree’ (number 1 on the scale) and ‘completely disagree’ (7 on the scale). The Cronbach alpha was 0.85 and the three variables were added together in a composite index of ‘assimilation’.

Utilization, i.e. the usability of local business knowledge, was measured by asking the respondent how the focal business operation differed from previous operations? The logic behind this measure is the argument of path-dependency in learning on foreign markets i.e. the less the new foreign operation differed from previous operations the easier it would be to utilize the existing knowledge. The difference was measured along two dimensions: (1) the newness of the foreign country, and (2) the newness of the customer(s) in the foreign market. On the 7-point Likert scale 1 indicated ‘new to the firm’ and 7 ‘well-known’. The two variables was added together as one construct for ‘utilization’.

Motivation to Learn was measured as the expectation of firm’s benefits of the focal business operation. The presumption is that expectation to the outcome and the motivation to realize potentials will be highly correlated. Therefore, the respondent was asked to indicate on a 7-point Likert scale the benefits of the business operation in terms of five dimensions: (1) growth; (2) revenue; (3) acquisition of knowledge; (4) expansion of business transactions with the key customer in the foreign market, and (5) expansion of business transactions with other customers in the foreign market. The Cronbach alpha was 0.80 and adding the five items together created a composite index of ‘motivation’.

Control Variables

In addition to the hypotheses about learning factors that make up “the Learning Box” we check for a number of factors that may have an effect on perceived market familiarity.

The knowledge gap may vary with the **size** of the entrant firm. With more resources large firms have better opportunities for employing specialists possessing local market knowledge. Conversely, small firms may be more risk averse (since their business diversification is limited) and therefore more sensitive to perceived knowledge gaps. We measure size as the total number of employees of the entrant firm as a whole, or (if a conglomerate) the number of employees in the division of relevance.

The knowledge gap may also be contingent on the **age** and the **international experience** of the entrant firm. It is more likely that aging firms have developed and fine-tuned learning procedures, including ways to combat knowledge gaps in relation to foreign markets. A counterargument is that the older firm may be plagued by dated, ineffective learning routines. The age of the entrant firm is measured as number of years since inception of the firm or division. **International Experience** is measured by years of international experience, number of foreign markets and foreign sales as share of total turnover of the firm.

Results

We estimated an ordinary least square model (OLS-model) to test our conceptual framework. Table 2 (next page) provides the statistical results of the regression analysis. The first column of the table lists the intercept and the independent variables; second column the coefficients of the dependent variable ('Perceived Knowledge Gap'). The values for variance inflation are all within the usual threshold (less than 6) indicating that we have no multi-collinearity problems in the data set.

The three Absorptive Capacity variables – recognition, assimilation and utilization – are all highly significant ($p < 0.01$) with the expected negative sign. This indicates that the more the three elements of absorptive capacity are present, the lower the knowledge gap of the foreign market venture. Hypotheses 1a, 1b, and 1c are supported. The standardized estimates show that the three absorptive capacity variables have stronger explanatory power in explaining the knowledge gap than the other variables. This is particularly true for recognition (-0.32) and assimilation (-0.44). The standardized estimates for motivation to learn (-0.19) and sources of new learning (-0.13) are significant but much lower.

Source of New Knowledge indicated the extent to which new knowledge came from internal to the firm or external sources. It was expected that internally sourcing would lead to a smaller knowledge gap. H4 was significant and negatively related to the Knowledge Gap indicating the smaller the gap, the more internal sourcing.

It was expected that Experiential Learning would be negatively related to the Knowledge Gap. This is not significant, H2 is not supported. The Elapsed time of the project is insignificant. Hypotheses 2 and 4 are unsupported.

‘Motivation to Learn’ is also significantly negative ($p < 0.05$) indicating that the higher motivation, the lower the knowledge gap. Hypothesis 5 is supported.

Table 2. Overall model results: OLS-model (Std. Errors are shown in parentheses)

	Knowledge Gap	Standardized Estimate	Variance Inflation
Independent variables			
Intercept	7.93*** (0.72)	0	0
Elapsed time	0.01 (0.03)	0.02	1.10
Source of New Knowledge	-0.13** (0.07)	-0.11	1.07
Recognition	-0.32*** (0.06)	-0.29	1.12
Assimilation	-0.44*** (0.04)	-0.56	1.04
Utilization	-0.11*** (0.04)	-0.15	1.07
Motivation	-0.19** (0.08)	-0.13	1.13
Experiential Learning	-0.10 (0.16)	-0.03	1.11
Controls:	0.02 (0.19)	0.01	1.06
- Size of Entrant Firm (1000's)			
- Age of Entrant Firm	-0.008* (0.005)	-0.10	1.15
- Int'l Experience of Entrant Firm	0.09 0.08	0.06	1.16
F-value	15.98***		
R-square	45.7		
Adjusted R-square	42.8		
N	200		

Note: ***, **, and *, denote significance at 1%, 5%, and 10% levels, respectively

Among the control variables only ‘Age of the entrant firm’ is mildly significant ($p < 0.10$). The other two control variables are insignificant.

Discussion

This study proposed and tested a model of factors that influence the perceived knowledge gap of firms entering a foreign market. It was proposed that the knowledge gap which is the difference between a firm's current knowledge and what was needed to perform was a function of the elapsed time, sources of new knowledge, motivation to learn, the extent of its experiential learning, and absorptive capacity. This model proposes that knowledge acquired to decrease the size of the gap, elapsed time, and past experiential learning mediate the relationship between the absorptive capacity and the perceived gap. We aim to resolve the following issues: (1) Is the absorptive capacity of the entrant firm critical to the closing of the knowledge gap; (2) Do entrant firms perceive greater value in closing the knowledge gap by internally generated knowledge or by externally, acquired knowledge? (3) What impact do other factors such as timing, motivation, and experiential learning have on closing the knowledge gap?

Absorptive Capacity

All three measures of relative absorptive capacity (recognition, assimilation, and utilization) were found to be significant predictors of reducing the size of the knowledge gap. We find that these three variables had the greatest impact on closing the knowledge gap in the case of foreign entry firms. Our results contribute to support the importance of the concept of the absorptive capacity of firms and further support the theory developed by Cohen and Levinthal (1994), Zahra and George (2002), and Lane et.al. (2000). We find that the greater the absorptive capacity of the firm, the greater will be the capacity of the firm for reducing its perceptions of knowledge gaps. Specifically we find that recognition and assimilation are particularly important for reducing the knowledge gap.

Sources of Knowledge

One of our contribution is that we find that entrant firms perceive greater value in closing the knowledge gap by internally generated knowledge than by externally, acquired knowledge. Since many firms do experience a “not invented here” syndrome, this is not surprising. At the same time, it is hard not to ask normative questions such as “Are firms ignoring useful knowledge that happens to be external?” One can argue that this is very positive and that the firms are learning to exploitation their current capabilities. On the other hand, March (1991) forewarns us that firms that adapt solely through exploitation, may in fact keep the firm in the race but may not put it in a position to performance successfully in a competitive environment. Our study does not address this particular question, but various theorists are suggesting that firms need to be better at sourcing knowledge externally because competition is now being knowledge-driven on a worldwide basis (Murtha, Lenway, and Hart, 2001). Firms that only generate new knowledge through internal means may be left behind.

Elapsed Time and Experiential Learning

The lack of a significant association between elapsed time and experiential learning with Knowledge Gap is at odds with the theories underlying foreign entry decisions. There are two possible explanations for this inconsistency. First, given the profound differences in foreign markets, the elapsed time of the particular operation may not be synergistic with the age and length of international experience of the entrant firm. Second, the finding that the experiential learning is not significant is surprising but may be consistent with March’s (1999) argument that there may be myopic aspects of organizational learning such that firms with experiential learning may be more myopic and not recognize knowledge gaps

Future Research Areas

Significant differences exist in the context of knowledge gaps for firms and this provides opportunities for researchers to explore whether the context is important and whether the factors influencing the knowledge gap vary based on context. We have explored an area, namely the case of foreign entry, in which there is widespread agreement that a knowledge gap exists when a firm undertakes an entry. One of the consequences of this may be that it is very clear to firms that a knowledge gap exists and that they have to do something about it. This may have influenced our results. It will be interesting to see if in the future, researchers study knowledge gaps in a much more uncertain context to see what factors influence it.

Studying knowledge gaps is certainly an area for future research to explore what are the relations between experiential learning, perception of knowledge gaps, and performance. Our dependent variable was the knowledge gap but future research might also link this to the performance of the firms.

Implications

The results of our study have several implications for organizational learning research and management. It is important to place an emphasis on how new knowledge is developed and how recognized knowledge gaps are addressed. Particularly when one is researching processes such as experiential learning and absorptive capacity, a longitudinal perspective provides important influencing factors. Further empirical research is critical to helping us determine the processes for filling knowledge gaps and the utilization of past knowledge.

Conclusion and Managerial Implications

In this study we explore how managers' perceived knowledge gap in relation to foreign markets is reduced. Potential determinants are derived from

internationalization and organizational learning theories as well as the concept of absorptive capacity. Building on these literatures, a conceptual model was developed and tested on a set of primary data of Danish firms and their foreign market operations. The empirical study suggested that the factors that pertain to the absorptive capacity concept – capabilities of recognizing, assimilating, and utilizing knowledge - are crucial determinants of knowledge gap elimination. In contrast, the two factors deemed essential in traditional internationalization process theory – elapsed time of operations and experiential learning – were found to have no or limited effect.

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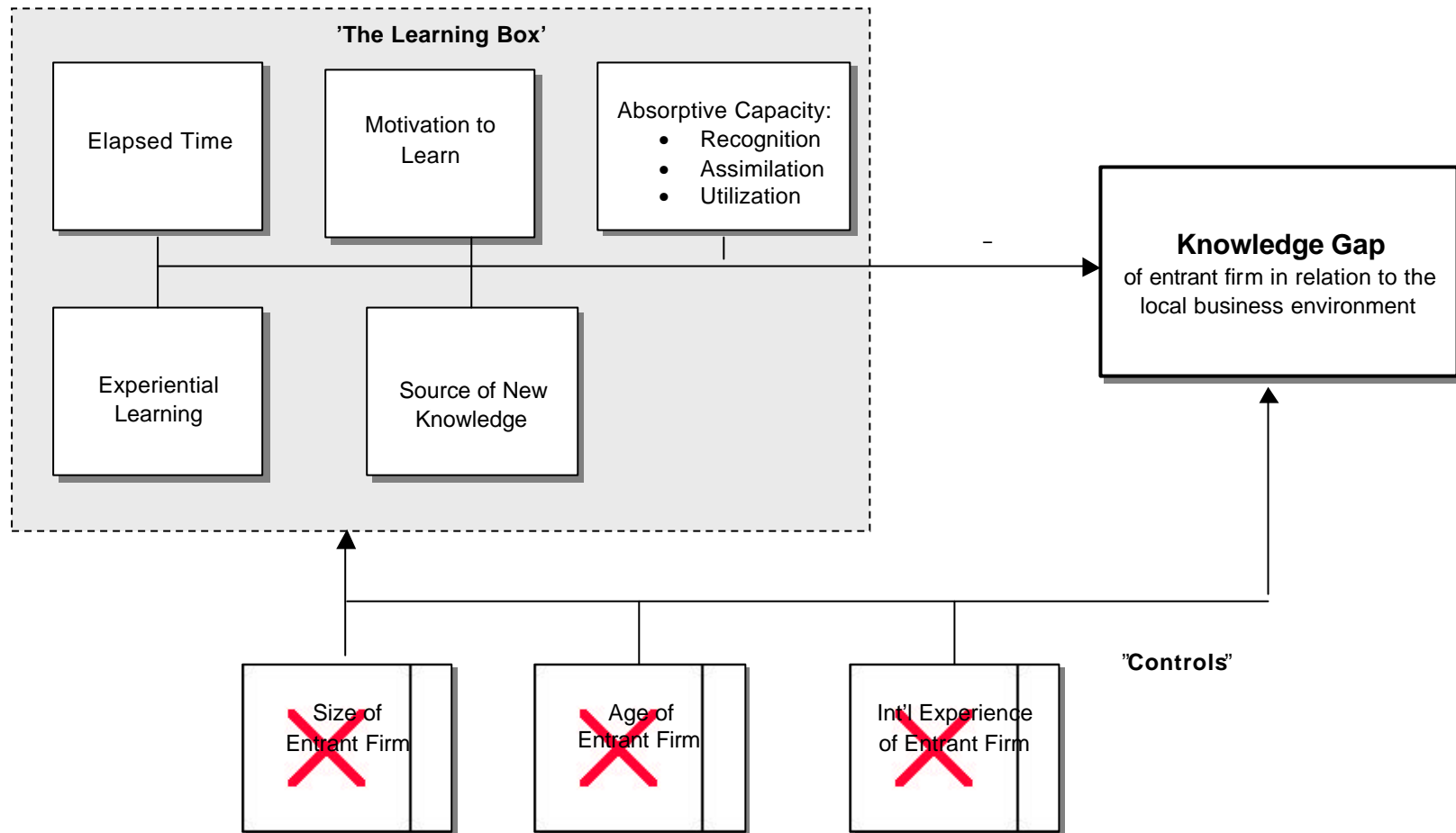


Figure 1. Conceptual Model of the Study: Potential determinants of knowledge gap reduction of entrant firms.

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