

**Knowledge Acquisition by Internationalising Small and Medium Sized
Enterprises**

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Abstract

This paper investigates the acquisition of new knowledge by internationalising small and medium sized enterprises (SMEs). Although there has been a growing recognition of the role of organisational learning in the internationalisation of firms, research into knowledge acquisition and learning is an area where there have been few empirical studies. Drawing on the concept of *absorptive capacity*, this study explores and examines the knowledge acquisition processes of international new ventures and incrementally internationalising SMEs.

A qualitative approach is adopted, based on 12 longitudinal case studies of internationalising firms participating in the Global Companies Development Programme run by Scottish Enterprise (the economic development agency). The firms were in the process of expanding internationally and thus fitted the aims of the study. Data collection involved multiple, semi-structured interviews with the chief executive officers of the firms conducted over three consecutive years. Secondary data on the firms was accessed through Scottish Enterprise and together with expert opinion provided both a means of validation, and enrichment of the interview data.

Traditional internationalisation process theory emphasises the importance of experiential market knowledge in explaining the gradual internationalisation of firms. International new venture theory tends to place more emphasis on knowledge intensity and unique product knowledge in explaining the early and rapid internationalisation of new firms. This paper provides insights into the nature of knowledge used by internationalising firms and distinguishes between different types and sources of knowledge. Findings suggest that market, internationalisation and product/technological knowledge are acquired depending on the decisions facing firms at the time. Knowledge acquired is often specific to the individual SME. General internationalisation knowledge, much neglected by the literature, was found to be important, new to the firms and acquired by all. Internationalisation knowledge is *specific* i.e. applicable only to the internationalisation process, or *generic*, i.e. applicable to both overseas and domestic operations. Insights emerge into how firms acquire experiential and objective knowledge from external and internal sources. The paper concludes with a discussion of the implications for theory, management and policy.

Key words: SMEs, internationalisation, knowledge, organisational learning, absorptive capacity.

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1. Introduction

This paper investigates the acquisition of knowledge by internationalising small and medium sized enterprises (SMEs). A growing number of SMEs are pursuing opportunities in overseas markets, and in recent years governments are encouraging more SMEs to internationalise to promote wealth creation and international competitiveness (OECD, 1997). Evidence indicates that small firms are internationalising more rapidly than before, some from inception (OECD, 1997; Oviatt and McDougall, 1994). Although there is growing recognition of the role of learning in the internationalisation process, research into internationalisation knowledge acquisition and learning is an area where there are few empirical studies, and these are mainly quantitative (Eriksson *et al.*, 2000; Sapienza *et al.*, 2004; Zahra, 2004). Furthermore, little is known about the entrepreneurial learning and growth processes in SMEs and the extant literature focuses on the individual learning of the entrepreneurs, neglecting the organisational learning processes of SMEs (Deakins and Freel, 1998; Cope and Watts, 2000; Minniti and Bygrave, 2001). This research seeks to address these gaps through rich insights into the learning processes of both international new ventures (INVs) and incrementally internationalising SMEs as they acquire knowledge and learn to internationalise.

The paper presents a discussion of existing literature relevant to an understanding of the role of knowledge and learning in the internationalisation process of firms, namely international business theory and organisational learning theory. Relevant international business theory, internationalisation process theory

(Johanson and Vahlne, 1977, 1990) and international new venture research (Oviatt and McDougall, 1994) identifies knowledge accumulation and learning by firms as a key influence on their internationalisation. This paper explores and examines the knowledge acquisition processes of international new ventures and incrementally internationalising SMEs based on an organisational learning framework of absorptive capacity (Cohen and Levinthal, 1990; Zahra and George, 2002). Internationalisation process theory has emphasised the importance of the acquisition of experiential market knowledge (Johanson and Vahlne, 1977, 1990), whereas absorptive capacity focuses on the external acquisition and assimilation of knowledge (Cohen and Levinthal, 1990). Experiential knowledge may be external or internal, for example if a member of the firm is working with and learning from an agent in a foreign market, they are gaining experiential knowledge of how to work with agents – the knowledge is therefore external as it comes from outside.

In this context, the aim of this paper is to investigate acquisition of new knowledge by firms as they internationalise. The study uses a qualitative approach, based on 12 longitudinal case studies of internationalising firms that were participating in the Scottish Enterprise Global Companies Development Programme (GCDP). The programme was developed as a result of the Global Companies Enquiry (1999), which analysed the importance of globalisation to the Scottish Economy but highlighted the limited extent of globalisation amongst Scottish firms (Scottish Enterprise, 1999). This study is part of a wider research and evaluation project.

2. Literature And Research Framework

Knowledge Acquisition and the Internationalisation Process

A review of the international business literature identified three types of knowledge that are important in the internationalisation process of firms: market, internationalisation and product/technological knowledge (Johanson and Vahlne, 1977, 1990; Eriksson *et al.*, 1997; Yli-Renko *et al.*, 2002; Oviatt and McDougall, 1994). Internationalisation process theory (IPT) identifies market knowledge and has been criticised for neglecting internationalisation knowledge (Eriksson *et al.*, 1997). International new venture theory (INV) highlights the importance of product/technology knowledge. Thus there is ambiguity in the literature of the importance of different types of knowledge.

Traditional internationalisation process theory or stages approach has emphasised the importance of experiential market knowledge acquisition (Johanson and Vahlne, 1977, 1990). Firms gradually acquire, integrate and use knowledge about foreign markets and operations and incrementally increase foreign market commitment. Following the ideas of Aharoni (1966) and Cyert and March (1963), current business activity is the prime source of experience, and international decisions are related to the operations currently performed in the market. Learning about internationalisation is seen as a cumulative path dependent process in which each stage adds to a firm's knowledge, previous knowledge has an important impact on the process (Johanson and Vahlne, 1977, 2006; Eriksson *et al.*, 2000). Market knowledge has been identified as *business*; clients, competitors and market conditions in a particular market, and *institutional*; government, institutional frameworks, rules, norms and values in a particular market (Eriksson *et al.*, 1997; Eriksson *et al.*, 2000). The assumption is that experiential knowledge is critical and that objective knowledge is of minor importance. Experiential knowledge is implicit and tacit and is acquired through operating in the market place. Internationalisation process theory has been

criticised as it neglects the role of more general internationalisation knowledge that is transferable from market to market (Eriksson *et al.*, 1997, 2000). However recent research has shown that firms can acquire market knowledge in other ways for example through networks, focused research, licensing, strategic alliances, acquiring and hiring people, (Chetty and Blankenburg Holm, 2000; Welch and Welch, 1996; Vissak, 2005).

International entrepreneurship literature and the development of international new venture (INV) theory has emphasised the importance of technological intensity and product knowledge (Oviatt and McDougall, 1994; Yli-Renko, 2002). Derived from tradition multi-national enterprise (MNE) theory of foreign direct investment that argues firms are international because they have an advantage in transferring resources across national borders (Dunning, 1988). Oviatt and McDougall (1994) argue that in knowledge-based and knowledge-intensive firms operating in increasing efficient international markets, competitors try to uncover unique knowledge and product alternative knowledge. Thus early and rapid internationalisation occurs where new ventures must internationalise from inception to compete in knowledge and technology intensive sectors (Oviatt and McDougall, 1999). INV theory has been criticised as much of the discussion relates to technology-based firms (Wilson, 2000), although studies have shown that early internationalisation is not necessarily attached to high technology ventures (Rennie, 1993). Research into knowledge acquisition has focused on technological learning (Zahra *et al.*, 2000). In conclusion, IPT has focused on the acquisition of specific experiential market knowledge, neglecting general internationalisation knowledge related to all markets and other sources of knowledge (Eriksson *et al.*, 1997). INV theory, on the other hand, has emphasised technological knowledge acquisition and learning (Zahra *et al.*, 2000).

Absorptive Capacity and Organisational Learning

Cohen and Levinthal (1990, p128) define absorptive capacity as the “ability to recognise the value of new external information, assimilate it, and apply it to commercial ends”. Cohen and Levinthal (1990) suggest that a firm’s learning is a result of its ability to exploit external knowledge and is critical to its innovation capabilities and later growth. Zahra and George (2002) distinguish between a firm’s *potential* (acquisition and assimilation) and *realised* (transformation and exploitation) absorptive capacity. Although absorptive capacity has tended to focus on R&D and innovation capability, which has led to over-emphasis on technological scientific knowledge acquisition, researchers have recently called for the construct to be broadened (Lane *et al.*, 2006). A firm’s ability to evaluate and utilise outside information is a function of its prior related knowledge and intensity of effort (Cohen and Levinthal, 1990; Kim, 1998). Thus, the development of absorptive capacity is history or path dependent (Cohen and Levinthal, 1990). When a firm wishes to acquire knowledge it must intensify its learning effort to create absorptive capacity (Kim, 1998).

Knowledge acquisition refers to a firm’s capability to identify, value and acquire externally generated knowledge (Cohen and Levinthal, 1989, 1990; Zahra and George, 2002). Organisational learning literature posits that the acquisition of external knowledge is critical to a firm’s absorptive capacity and innovative capabilities (Cohen and Levinthal, 1990). Indeed, Huber (1991) in the seminal article, identifies the importance of both internally and externally focused knowledge acquisition for firm learning. Internally focused knowledge acquisition includes knowledge acquired prior to an organisations birth and subsequent direct experiential learning. Externally

focused knowledge acquisition includes vicarious learning by acquiring second hand experience of others and “grafting” on new staff or units. Firms also acquire knowledge through scanning, focused research and performance monitoring which can be internally or externally focused (Huber, 1991). Kogut and Zander (1992) show how knowledge can be recombined through a process of internal and external acquired learning.

Absorptive capacity encompasses a firm’s ability to combine both internal and external knowledge. It is a type of learning that is different from “learning by doing” (Arrow, 1962), where firms become more practised and efficient at what they are already doing. With absorptive capacity a firm may acquire outside knowledge that will permit it to do something different (Cohen and Levinthal, 1989). Organisation learning theory has distinguished between learning to increase a firm’s effectiveness and learning to increase a firm’s awareness of opportunities (Huber, 1991). The former emphasises learning within existing activities and the latter emphasis potential activities. Described by March (1991) as *exploitation* and *exploration* behaviour, firms need both types of behaviour in organisational learning. Firms need to combine learning from exploration and exploitation behaviour, and manage a balance between both types (March, 1991; Levinthal and March, 1993). Too much reliance on exploration, where firms engage in new research, is expensive and may result in too many underdeveloped concepts and ideas, whereas too much emphasis on exploitation is unlikely to lead to generative learning (March, 1991). Indeed this supports the argument that the optimal growth of the firms involves a balance between exploitation of existing resources and the development of new ones (Penrose, 1959; Rugman and Verbeke, 2002). By focusing on current activities, IPT over-emphasises exploitation behaviour, where firms invest over time in a specific market.

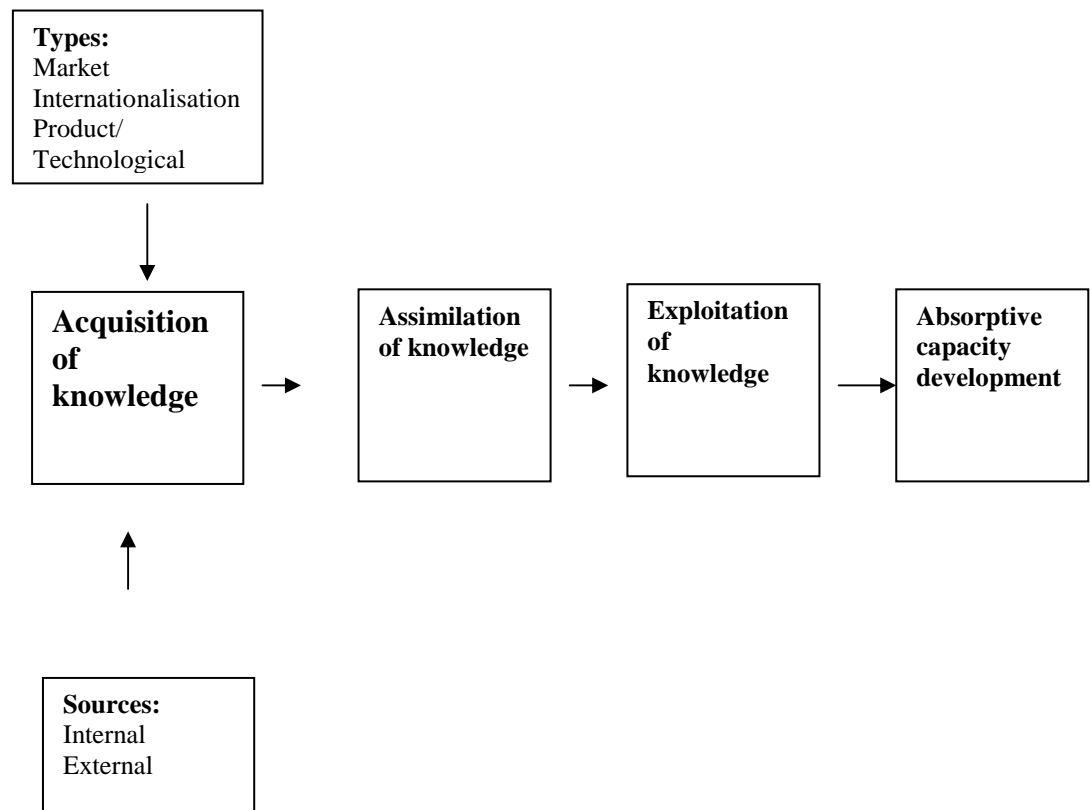
It overlooks exploitation behaviour where firms invest in new markets and operations that are unconnected to market specific, current activities (Forsgren, 2002).

Argyris and Schon (1978) distinguish between single and double loop learning and Senge (1990) describes these different types of learning as adaptive and generative learning. It has been argued that market specific knowledge acquisition can be single loop or adaptive learning (Forsgren, 2002). It develops at the operational level and keeps the firm within its current business. By contrast, general internationalisation knowledge acquisition involves double loop or generative learning. It accumulates at the higher level in the firm's hierarchy and is a driving force to the firm to do new things (Forsgren 2002). IPT's emphasis is on adaptive or single loop learning where, as a result of experiential knowledge, the firm deals with problems and opportunities in their context (Johanson and Vahlne, 1977).

Conceptualisation

This research takes an integrated approach to investigating the knowledge acquisition of internationalising firms by combining aspects of internationalisation process theory, international new venture theory and organisational learning. The paper presents a framework shown in Figure 1, where, based on a firm's absorptive capacity, knowledge acquisition results from a firm's ability to acquire market, international and product/technological knowledge from internal and external sources.

Figure 1: Conceptualisation - Knowledge Acquisition by Internationalising SMEs



In this context, the aim of this paper is to investigate acquisition of knowledge by firms as they internationalise. The specific research questions are:

- i. What are the different types of knowledge used by firms?
- ii Where do firms acquire the new knowledge from?

3. Methodology

Research Design

This study is based on an interpretivist paradigm whereby a subjective approach focuses on the deep meanings and aims to understand what is happening in

the totality of each situation (Saunders *et al.*, 2003). Recognising that organisation processes are embedded in their context (Pettigrew, 1992), the research approach adopted is inductive, potentially theory-building, context specific and retrospective (Saunders *et al.*, 2003). A qualitative methodology based on interviews with the CEOs of firms participating in the GCDP was employed to secure a deep understanding of the processes of knowledge acquisition by SMEs. A longitudinal case study research design enabled the study of the change and development of the firms over time including knowledge their acquisition (Saunders *et al.*, 2003; Pettigrew, 1992). Deep insights into the types and sources of new knowledge that firms need to acquire whilst internationalising were attained. Multiple comparative case studies enabled within and cross-case comparisons, and a search for cross-case patterns and themes to provide accurate and reliable theory and capture novel findings (Eisenhardt, 1989; Yin, 2003; Pettigrew, 1992; Miles and Huberman, 1994).

The research project was developed in co-operation the Scottish Enterprise, the regional development agency in Scotland. Access was gained to firms that participated in the Scottish Enterprise Global Companies Development Programme (GCDP). The firms had completed the GCDP in the previous twelve months before the first interview in 2003 and were in the process of implementing an internationalisation strategy, devised during the programme. Ghauri *et al.*, (2002) suggest that each case in a multiple case study investigation should be selected to serve a particular purpose in the study. In this research it was not known in advance if the firms had common characteristics (Stake, 2000). The firms were different types of Scottish firms wishing to expand internationally. It was found during the research that they were from a mixture of manufacturing/service industries, high/low technology and international new ventures/traditional SMEs. Thus the criteria used for selection

was richness of data and replication logic (Perry, 1998) rather than random sampling (Patton, 2002). Validity is enhanced through emergent relationships being confirmed, theory can be refined or extended where cases disconfirm the relationship (Eisenhardt, 1989). Case studies are generalisable to theoretical propositions, not populations as in survey research (Yin, 2003). The firms were in the process of internationalisation and thus fitted the aims of the research. All of the firms were approached, fifteen out of eighteen agreed to participate in the research. Three firms then dropped out during the research period, one was taken over, a second re-located its business to the USA and a third was not an SME and felt the programme was not relevant.

Case studies can be exploratory, descriptive and explanatory (Yin, 2003). In this study all three approaches were used. The exploratory aspects allow the researcher to answer “what” questions; what were the issues facing the firms and what new knowledge was required? A descriptive approach is taken to portray an accurate profile of the events and situations. An explanatory approach seeks to establish causal relationships between variables and answer “how” and “why” questions (Yin, 2003).

Data Collection

Data collection involved multiple, semi-structured interviews with the chief executive officers (CEOs) of the firms, carried out over a three year period. Each CEO was interviewed annually over the years 2003, 2004 and 2005. The interviews lasted approximately one hour and were taped and transcribed. The CEOs were the prime focus of attention as they are the key decision makers in the SMEs. The longitudinal design of the research enabled data collected from the interviews with the CEOs in earlier settings to provide the context for the interpretation of later events and data collected later provides confirmation about the new insights into the interpretation of data collected on earlier occasions (Huxham, 2002). The research

used multiple sources of data allowing data triangulation (Yin, 2003). The researcher had access to other key informants in several firms and to Scottish Enterprise records and experience. These included consultants' reports, associated data on each firm, and expertise within Scottish Enterprise (the GCDP executives and account managers who worked with the firms), which enhanced the validity of the research through cross-checking and provides a more complete and holistic portrait of the phenomena. Corroboration of the interviews through the use of Scottish Enterprise archival records and other secondary data was used to validate the research (Ghauri *et al.*, 2002).

It is recognised that the role of the researcher is vital in qualitative research. To ensure validity the researcher is required to understand the received information, be a good listener, understand what is meant by what is said (Ghauri, *et al.*, 2002). To assist with this process, background reports on the companies were consulted before each interview. A semi-structured interview schedule was prepared in advance of the interviews, which helped the researcher to control the situation, ask the right questions, adapt to new or unexpected situations and develop trust. The interview schedule was prepared using open questions and the process questioning language of "what, who, where, why, when and how" recommended by Pettigrew *et al.* (2001). This supported the exploratory and inductive nature of the research. Table 1 below illustrates the nature of the questions.

Table 1: CEO Interview Questions Extract – Knowledge Acquisition	
1.	What were the main issues in your firm's international activities over the last year?
2.	What were the triggers for these?
3.	What did you find you needed to know more about to do each of these activities?
-	What areas of knowledge were needed?
-	Where did you learn or acquire this knowledge?

Analysis

The case study analysis used both within-case and cross-case methods as recommended by Miles and Huberman (1994). The analysis involved a process analytical abstraction where analysis was performed case by case, cross case by group and across all groups. Case data was categorised into variables, matrix and text tables, and content analysis summary tables were created to undertake and present the analysis of types and sources of knowledge used by the firms (Miles and Huberman, 1994).

The constituent components of the knowledge acquisition (types and sources of knowledge) were classification into variables. The definitions of the variables are shown in table 2. The types of knowledge acquired by firms were classified into market, internationalisation and product/technological knowledge. Market knowledge is defined as the acquisition of business and institutional knowledge of a specific market. Internationalisation knowledge is general knowledge that is not market specific and is transferable from market to market, such as management processes and market entry modes. These may be general processes such as head office administration or for example knowledge of sales operations acquired in a market but can used world-wide. The in-depth nature of this research enabled these different types of knowledge to be distinguished. Product/technological knowledge is the acquisition of specific technical knowledge to develop and supply products including and the research and development of technology. For example, this may include the knowledge to manufacture products and supply services or the use of external manufacturers.

The source of each knowledge type was analysed and described. This was categorised into internal and external sources (which were dichotomous). Internal

sources can be experiential or objective sources of knowledge and external sources include published information and vicarious (externally acquired experiential knowledge).

Table 2: Classification Used For Knowledge Acquisition Variables		
<i>Component of absorptive capacity</i>	<i>Classification for variables</i>	<i>Definitions of variables</i>
Acquisition	Type of knowledge	<p>Market knowledge: Specific business and institutional knowledge of a country market.</p> <p>Internationalisation knowledge: General knowledge which is transferable from country to country, includes internal management processes and market entry modes.</p> <p>Product/technological knowledge: Specific knowledge to develop and supply products including the research and development of technology.</p>
Acquisition	Source of knowledge	<p>Internal sources: Experiential (tacit knowledge) and objective (explicit knowledge).</p> <p>External sources: Published (explicit knowledge) and vicarious (tacit knowledge).</p>

An analytical framework was constructed during the analysis whereby four groups of firms were identified: start-up firms, internationalising technology-based firms, internationalising manufacturing firms and firms that were not actively internationalising or de-internationalised. The firms were also categorised by knowledge intensity as; traditional; knowledge-intensive and knowledge-based using Oviatt and McDougall's (2005) classification.

Profile of the case study companies

The twelve companies involved in the research were from a variety of industry contexts. Seven firms started international activities within six years of starting up and were classified international new ventures (INVs). Five were incremental internationalisers that started internationalisation after six years of domestic trading. All firms had some international experience when they joined the programme and

were team managed. They were all independent Scottish firms, except for one firm that had been a technology SME that merged with foreign company but retained the original business unit in Scotland. Three of the firms were start-ups that were spin-outs from other organisations. One was a spin-out from an SME, another was a university spinout and a third was a GCDP participating manufacturing firm that went into liquidation during the research, where the CEO started a new venture. Five firms were small firms with less than 50 employees at the beginning of the research. Seven were medium sized firms of which six firms had less than 250 employees. One firm had experienced high growth in the previous few years and had 320 employees.

Four groups of firms were identified and were given names to preserve anonymity as follows; three start-up firms (SU1, SU2, SU3), three technology based firms (TECH1, TECH2, TECH3), four manufacturing firms (MAN1, MAN2, MAN3, MAN4) and two firms that were inactive internationalisers (IN1, IN2). Two of the start-up firms began trading during the research; the third was still in the process of developing the new idea. The manufacturing and technology-based firms continued their internationalisation. The two inactive internationalisers did not internationalise further to focus on the UK business. One of these maintained its previous level of international business and the other de-internationalised.

4. Findings And Discussion

Market, Internationalisation and Product Knowledge Acquisition

Findings suggest market, internationalisation and product/technological knowledge were acquired by firms depending on strategic decisions facing firms at the time, growth objectives (e.g. gain market presence, expansion in new markets,

consolidation, penetration of existing markets), and performance and knowledge intensity of products. The knowledge acquired is often specific to the individual SME.

Table 3 below shows the types of knowledge used by firms and whether it was acquired from internal or external sources.

Table 3: Types and sources of new knowledge							
<i>Firms</i>	<i>KB, KI, T</i>	<i>Market Knowledge</i>		<i>International Knowledge</i>		<i>Product/Technological Knowledge</i>	
		I	E	I	E	I	E
SU1	KI	√	√	√	√		
SU2	KB	√	√	√	√	√	√
SU3	KI	√	√		√	√	√
MAN1	T	√	√		√		
MAN2	KI			√	√	√	√
MAN3	T			√	√		
MAN4	T			√	√		
TECH1	KB		√	√			√
TECH2	KB	√		√	√		√
TECH3	KB		√	√	√	√	√
IN1	KI	√	√	√	√		√
IN2	T		√	√	√		√

KB – Knowledge-based firm
KI – Knowledge-intensive firm
T – Traditional firm

I – Internal sources
E – External sources

Market knowledge was needed by the manufacturing and technology firms when they expanded in existing markets, entered into new markets and adapted products to overseas markets. New *market knowledge* resulted in firms acquiring and building close relationships with overseas partners, customers, suppliers, manufacturers, distributors and agents. They acquired increased knowledge of overseas markets, developed customer-focused sales models and processes throughout the firms which could be transferred to other markets. Customer-focused product development processes were created to support future growth. Firms increased sales by penetration, consolidating or entering markets and gaining market profile in new overseas markets. Inactive internationalising firms formed domestic partnerships, developed sales focus and increased sales operations in the UK. The start-ups required

market knowledge to adapt the new products for the overseas markets and gain market presence. Entering new markets required intense effort by all firms. It was more time consuming and costly than expected, resulting in slower expansion into other markets.

For example the CEO of MAN4 commented *“We want to be a global business and there are still markets which are unexplored.....We don’t have international resources to develop all markets. When we set up our US subsidiary we did not want to start a new project till we made money. We learnt a lot about the US, but each market is different”*.

Internationalisation knowledge was the most frequent new knowledge needed and was acquired by all firms. This knowledge was found to be either *specific* or *generic*. For example, managing overseas partners, international management structure, project management, overseas franchising, sales and marketing processes are specific to the internationalisation process. Generic internationalisation knowledge involved firms acquiring knowledge to improve head office management structures and delegation in order that both UK and overseas managers became involved in decision-making. This knowledge is applicable to both overseas and domestic operations.

Where firms had under-performed overseas, for example, as in the case of MAN2 and MAN3, there was period of consolidation before continued expansion. This often involved the conversion of specific market knowledge to general internationalisation knowledge and management know-how, e.g. the acquisition of international project management skills (MAN3) and improved international sales and marketing processes (MAN2). The CEO of MAN2 commented *“We weren’t performing as well in sales as we should and identified that sales and marketing were*

our weakness in the business. We brought in an outside consultant to develop the people but also to develop processes internally to monitor and plan properly". The conversion of knowledge also applied to inactive internationalisers which acquired market knowledge of UK customers to develop new products and services. Thus, different types of knowledge were often inter-related.

Overall, increases in internationalisation knowledge resulted in strategic approaches to decision-making, new management systems, better costing, project management and planning, costing and control. Market entry models were developed that could be applied to new markets. Firms developed strategies which enabled them to compete world-wide, for example, increasing supply flexibility, achieving scale of operations with less reliance on few customers, intellectual property protection strategies. These resulted in increased sales and improved profitability. Inactive internationalising firms increased sales to existing and new customers in new UK regional markets.

Finally, internationalisation knowledge is developed from specific market and product knowledge. Thus the findings of this study suggest that the use of internationalisation knowledge by firms to support their current overseas activities is an important driver of internationalisation. This has tended to be overlooked by internationalisation process theory.

Product/technological knowledge was continuously acquired by all firms in the sample except the traditional manufacturers. The technology firms were concerned with R&D commercialisation and profitability to develop new products to support growth. New *product and technical knowledge* enabled them to use technology to develop new innovative products, adapt and launch products to meet world-wide customer needs, and use technological innovations to add value to

manufacturing output. The CEO of SU2 commented *“In reach of the major geographies we learned that you have to do something different and understand and develop the different solutions that were needed in each country. This was then put into our sales message”*. Firms also developed product knowledge to more general internationalisation knowledge. For example, one firm (TECH 1) needed to improve the management of its UK sub-contractors. Another firm (TECH2) transferred manufacturing under licence to overseas contractors to reduce costs, acquired knowledge on how to protect its intellectual property and set up a licence agreement.

The manufacturing firms did not acquire new product knowledge where they had well defined product ranges and focused on developing overseas markets for existing products. In support of IPT (Johanson and Vahlne, 1997), new product knowledge was not always important for a firm’s international growth. However, this was irrespective of whether firms were INVs or incremental internationalisers, for example as in the case of MAN1, a traditional manufacturing firm that went straight to overseas markets at inception. Thus although this study supports the view of Bell *et al.* (2003) and Oviatt and McDougall (2005) that technological knowledge is an important driver of internationalisation, this study found that traditional manufacturers adapting well understood technologies may also embark on early and rapid internationalisation.

Internal and External Sources of Knowledge

Table 3 above shows that acquiring new knowledge from both internal and external sources was important for all three types of knowledge, thus supporting the importance of externally acquired knowledge suggested by the absorptive capacity concept (Cohen and Levinthal, 1990). Firms acquired experiential knowledge from outside the firm for example, by recruiting staff, using external consultants and

overseas government agencies. This is an important source of knowledge which is neglected by the internationalisation process literature (Johanson and Vahlne, 1977; Eriksson *et al.*, 1997). With the regards to acquiring market knowledge the CEO of MAN4 commented *“Finding the right people in each country and making the investment to find and support overseas staff is a limiting factor that has a major influence on the firm’s internalisation”*. SU2 employed a new director with high industry and international profile, the CEO commented *“X’s knowledge of the international market has been an eye opener, we had thought the US was the main market to crack, but with X’s involvement we might have more engagement with the Middle and Far East, so it will be a learning process. We are currently learning what he knows that we didn’t, it is all additional knowledge”*. The CEO of SU3 explained that UK government contacts abroad are an important source of knowledge, stating *“The Scottish Enterprise man on the ground in China was able to help and support us and introduce us to potential design manufacturing partners in China. We developed a good working relationship with him and speak most weeks. For example, although the people we deal with people speak English.....because of different cultures, misunderstandings can happen”*. Firms also acquire knowledge from external consultants, as the CEO of SU3 explained *“Although over the years I have traded with China, I have never had to get into that sort of partnership. We employed a consultant to learn about the culture, which was very beneficial. The first thing we learned is not to expect the same culture as you have in the UK of doing business – the practices are totally different”*.

Furthermore, the study found that firms used and often combined external, internal, experiential and objective sources of knowledge. New knowledge was acquired internally from individuals and groups within the firm, for example, creating

cross-functional project groups, CEO prior expertise and experientially thought visits to overseas markets. All firms combined these internal sources with external knowledge sources from the UK and abroad such as suppliers, competitors, customers, local community, government sources, published reports, partnerships and the recruitment of new employees with knowledge and experience. Thus, combining internal and external knowledge was an important knowledge source. There were some occasions where firms used only external sources of new knowledge and there were very few occasions when firms only used internal, experiential sources of new knowledge. All firms except one (TECH1), looked to external sources to acquire internationalisation knowledge and relied on management experiential knowledge only. This firm suffered delays the establishment of its US subsidiary, findings suggest that external advice might have helped the firm to acquire internationalisation knowledge quicker and prevent delays in its internationalisation. Lack of acquisition of external knowledge is a barrier to learning. These findings support the knowledge-based view of the firm that highlights the importance of combinative capabilities in the internationalisation of firms and the accumulation of know-how (Kogut and Zander, 1992, 1993).

Whilst this study supports the view of IPT that firms acquire market knowledge from operating in the market (Johanson and Vahlne, 1977), it was found that when firms were expanding in an existing market and/or entering new markets, they looked to both external and experiential sources of market knowledge. For example, they combined internal experiential knowledge from operating in and visiting overseas markets, with external expertise by recruiting sales and marketing staff, accessing UK government support and overseas networks, consultants and other

advisers and published sources. These findings suggest that objective and vicarious experiential knowledge are important external sources of knowledge that extends IPT.

5. IMPLICATIONS OF THE RESEARCH

Implications for the Literature

The distinctions between the types of knowledge are blurred and not clearly distinguished in the literature (Johanson and Vahlne, 1997; Eriksson *et al.*, 1997). This inductive, in-depth approach has helped to unravel these complexities and provide additional insights into the nature of knowledge acquired by internationalising SMEs. It was found that firms acquired and combined market, internationalisation and product/technological knowledge. This supports the idea of general or generic international knowledge suggested by Eriksson *et al.* (1997) but additionally proposes that general internationalisation knowledge can be two types. First, it can be specific to the internationalisation process and transferable to different markets, for example knowledge of market entry modes, managing overseas agents and partners, overseas franchising, overseas project management. Second, there is generic knowledge which is applicable to overseas and domestic markets, for example delegation, knowledge sharing systems, WEB design.

The study also explored the importance of product/technological knowledge of internationalising firms, which was largely ignored by IPT and limited to technology-based/intensive firms in INV theory (Johanson and Vahlne, 1997; Oviatt and McDougall, 1994). Furthermore, by focusing on the acquisition of knowledge internally through a firm's current activities, IPT applies a narrow definition of experiential learning (Johanson and Vahlne, 1977; Forsgren, 2002). On the other hand, absorptive capacity emphasises the importance of external knowledge (Cohen

and Levinthal, 1989). By empirically examining sources of knowledge used by SMEs in the processes of internationalisation, this research found that firms combine these sources of knowledge, distinguished between and highlighted the importance of other sources of knowledge. For example, this research suggests that firms can increase the pace of internationalisation through the acquisition of external experiential knowledge. The research has highlighted the importance of objective sources of knowledge in the form of published research and information used by firms, which is largely ignored by IPT. Table 4 presents a framework to illustrate the different dimensions of knowledge sources used by internationalising in firms for each knowledge type.

Table 4: A Typology of Knowledge Types & Sources in SME Internationalisation				
<i>Source of knowledge</i>		<i>Market Knowledge</i>	<i>Internationalisation Knowledge</i>	<i>Product/technological Knowledge</i>
Internal	Experiential	Operating in overseas markets.	Cross functional project teams.	Working with customers/partners.
	Objective	Market information system.	Management information system.	Formal internal product knowledge management system.
External	Experiential	Acquiring staff with the experience, government bodies overseas.	Acquiring staff with the experience, using consultants, GCDP.	Acquiring staff with the experience, using consultants.
	Objective	Published market research and other publications.	Publications, books.	Published scientific/ technological research.

Lessons for Management

To increase absorptive capacity and hence learning, firms acquired external experience for example by recruiting people or acquiring external advice. Barriers to learning included the inability of firms to acquire new knowledge externally. A key lesson for management is that it is important for firms to recognise what they don't know. The public sector has a role to play to help firms to recognise these learning needs and acquire new knowledge.

Implications for Public Policy

The GCDP provided specific market, internationalisation and product/technological knowledge to meet the individual companies' needs. External knowledge and support gained by participating in the GCDP helped firms to increase their absorptive capacity. This is particularly important when new knowledge is unrelated to its on going activity i.e. when absorptive capacity is not a by-product, firms must dedicate effort exclusively to creating absorptive capacity (Cohen and Levinthal, 1990).

Rapid internationalisation offers potential high growth for both traditional and knowledge based/knowledge intensive firms; however it is a high risk activity (Sapienza *et al.*, 2006). The GCDP involved targeted provision; tailored to meet the individual companies' needs to help companies reduce this risk. Whilst the knowledge required was often firm specific, it also involved general aspects that were important for general business management. Thus, although the international focus of the programme was important for the firms, there are general aspects involving organisational and management development that could be provided through generic management development or growth programmes that could offer cost-saving advantages.

Recommendations for Further Research

This research has shown that knowledge has a significant influence on SME internationalisation. In order to take the literature forward it is suggest that a new approach is developed incorporating existing frameworks (such as IPT) but where the knowledge based view and absorptive capacity have a more critical role. This supports suggestions by some researchers for a more holistic, integrative approach to the analysis of SME internationalisation (Coviello and Martin, 1999; Jones, 2001) and

that using an approach linked to, for example the knowledge based view, would be advantageous (Kuivalainen and Bell, 2004).

Limitations of the study

The sample selected were participating in the GCDP. Whilst this offered good access to the firms and secondary sources of data, this limits the generalisability of the findings to firms actively engaging in internationalisation.

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