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**Retrospective and Prospective Learning:
Accelerating the Internationalization Process**

Margaret Fletcher, Ph.D.*
Senior Lecturer in International Business
Adam Smith Business School
University of Glasgow
Glasgow G12 8QQ
Margaret.Fletcher@glasgow.ac.uk

Simon Harris, Ph.D.
Professor of International Strategy
Business School
University of Edinburgh
simoninmelrose@outlook.com

&

Robert Glenn Richey, Jr., Ph.D.
Harbert Eminent Scholar in Supply Chain Management
Harbert College of Business
Auburn University
Richey@auburn.edu

*Corresponding Author

Retrospective and Prospective Learning: Accelerating the Internationalization Process

ABSTRACT

This paper contributes theoretical understanding to the learning processes adopted by firms for successful internationalization. Drawing from the internationalization process and organizational learning research, our longitudinal case study examines a firm's learning processes as it grows internationally. In different phases and in different areas the firm learned at different paces, gradual and steep, and by responding retrospectively to past failings, and prospectively to anticipated challenges. From case data we identify and develop four constructs of internationalization learning: Gradual Retrospective, Steep Retrospective, Gradual Prospective, and Steep Prospective learning. The appropriateness of each depends on the urgency towards addressing challenges, and the firm's learning capabilities. Firms can develop and steepen retrospective learning capability, enabling rapid identification and response to internationalization problems. Firms can also employ prospective learning to plan the development of knowledge capabilities ahead of future internationalization activity, to accelerate their learning, and increase the speed and effectiveness of internationalization.

Key words: Internationalization Process, Organizational Learning, Performance-Feedback, Retrospective Learning, Prospective Learning`

Retrospective and Prospective Learning: Accelerating the Internationalization Process

1. Introduction

Johanson and Vahlne's (1977) early theoretical explanation of a firm's development of international operations, based on Cyert and March's (1963) behavioral theory of the firm, presented the foundation of internationalization as a learning process and formed the headwaters of an extensive research stream (Vahlne & Johanson, 2017). This research, combined with investigations of unsatisfactory firm performance, has encouraged managers to harness international growth through learning to avoid performance impairment and losses (Dierickx & Cool, 1989; Jiang, Beamish & Makino, 2014). Embracing process and performance perspectives, researchers have tended to focus tightly on new market entry, even when it is expected that internationalization involves extended learning beyond initial entry (Prashantham & Young, 2011; Zahra 2005b). Extant research has identified the need for a deeper understanding about learning relationships in new international territories in addition to the management of the extended international enterprise (Eriksson, Johanson, Majkgård, & Sharma, 1997; Fletcher, Harris, & Richey, 2013; Johanson and Vahlne, 2009).

It was initially assumed that knowledge would mainly be acquired from direct experience, but subsequent research has identified other ways of learning that can expedite process (Freeman, Hutchings, Lazaris, & Zyngier, 2010; Huber, 1991; Prashantham & Floyd, 2012). Still, the optimum methods of learning to support long-term internationalization have not yet been identified nor have the best ways to initiate or alter learning (Bunz, Casulli, Jones & Bausch, 2017; Casillas, Moreno, Acedo, Gallego, & Ramos, 2009; Cui, Griffith, & Cavusgil, 2005; Pellegrino & McNaughton, 2017; Prashantham & Young, 2011; Yalcinkaya, Calantone & Griffith, 2007). Despite a number of attempts within the international business domain to extend theory beyond the behavioral theory of the firm (see Forsgren, 2002), there has been limited research into the specific learning processes that internationalizing firms undertake over time (e.g. Casillas & Moreno-Menéndez, 2014; Fletcher & Harris, 2012; Pellegrino & McNaughton, 2017; Saarenketo, Puumalainen, Kuivalainen & Kyläheiko 2004). Many have argued that we need a deeper theoretical understanding of the organization and related internationalizing

growth processes (Cavusgil & Knight, 2015; Coviello, 2015; Zander, McDougall-Covin, & Rose, 2015; Zahra, 2005b).

Our study responds to multiple calls for international process research (Pellegrino, & McNaughton, 2017; Vahlne & Johanson, 2017; Welch, Nummela and Liesch, 2016; Welch & Paavilainen-Mäntymäki, 2014; Zahra, 2005b) and in doing so provides a multi-point contribution to our understanding of the internationalization learning process. The study ultimately seeks to understand the different learning processes employed by a firm that achieve sustainable internationalization performance and to explore how these processes change over time (Langley, Smallman, Tsoukas & Van de Ven, 2013). We examine what triggers managers' learning, what this learning comprises, how they learn it, and what changes in the learning process over time. As a research question, we relax the internationalization "gradual" and "experiential" learning assumptions to examine if the internationalization learning process might be more dynamic than expected, and inquire whether and how learning may occur at both different rates of pace and in forms other than experience.

A process-based case methodology was selected to provide rich business, management, and learning process data in an internationalizing firm (see Langley et al., 2013), an approach advocated to be the strongest method for identifying diverse and multifaceted learning processes (Welch & Paavilainen-Mäntymäki, 2014). Access to secondary and archival data enabled purposeful sampling selection of and deep extended research access to a firm (referred to here as DPL) that sustained internationalization over long periods of dynamic global change. This approach enabled access to rich data on the contexts, dimensions, benefits, and limitations of the firm's international learning process from early internationalization to its status as a mature international enterprise (Miles, Huberman, & Saldana, 2014; Yin, 2014).

Rapid internationalization generated considerable risks for DPL and some of its failings were near fatal (Sapienza, Autio, George & Zahra, 2006). DPL survived these by massively increasing the pace and intensity of its learning. Initially, DPL mainly undertook *retrospective learning*, the kind of problem-based experiential learning that underpins the Uppsala Internationalization Model (Johanson & Vahlne, 1977), that includes an observation of failing performance, diagnosis of its causes through problem searches, and

implementation of a new structure and/or strategy for the business to address the problems identified (March & Shapira, 1987; Boyle & Shapira, 2012). DPL first learned and developed gained a capability to accelerate this process from one that we conceptualize as *gradual retrospective learning*, through new ways of undertaking this process in what we conceptualize as *rapid retrospective learning*.

Most important, we distinguish a different approach to internationalization learning: *prospective learning*. This also follows behavioral theory but is not compatible with the assumption that managers learn in response to problems only after they are experienced. DPL's managers and advisors anticipated the well-known problems faced in internationalization, and planned learning programs and capability development in line with the firm's growing international goals and strategy (Van de Ven & Poole, 1995). Learning capability is proactively enhanced with infusion of vicarious knowledge from external advisers and consultants, by embedding additional expertise through recruitment, and with training programs. When this is scheduled to support long term internationalization objectives, we conceptualize the process as *gradual prospective learning*. In other times, such as when rapidly responding to new internationalization opportunities, we conceptualize *steep prospective learning*. By increasing the firm's capacity to identify and undertaking corrective actions more quickly and effectively, *gradual and steep prospective learning* complement firm's *retrospective learning* and enhance firm's ability to internationalize rapidly and successfully.

2. Theoretical Development

The focus on learning in the internationalization process began when organization behavior researchers applied their theoretical lens to the firm's internationalization phenomenon. For example, the introduction to Johanson and Vahlne's groundbreaking (1977) article summarizes a learning model of firm development that sought "theoretical explanation through the behavioral theory of the firm" (Cyert & March, 1963, p. 23). Their work reflected a core assumption of the behavioral theory of the firm, namely that organizational performance requires the enactment of a central learning process. This key conceptualization supports that market entry success requires knowledge that is learned

experientially during the process of increasing an organization's exposure to international implementation, operations, and management. Their findings have underpinned much of the subsequent internationalization research (e.g. Casillas et al., 2009; Clarke & Liesch, 2017; Eriksson et al., 1997; Forsgren, 2002, and 2016; Johanson & Vahlne, 1990, 2003, 2006, and 2009; Love, Roper, & Zhou, 2016; Pellegrino & McNaughton, 2017; Vahlne & Johanson, 2017, and 2020).

As a foundation, Johanson and Vahlne aimed to “contribute to conceptualization in the field of the internationalization of the firm and thus increase understanding of the development of international operations” (1977, p.23). A key component of their internationalization process (IP) model is the commitment – risk interface. Due to psychic distance, international commitment is increased as firms gain experience in the marketplace, which results in a path-dependent, slow incremental learning process. It is assumed that firms expanding at a faster pace face the heightened risk of making mistakes (Meyer & Gelbuda, 2006). Path-breaking firms that deviate from a gradual path of international growth take on higher risks that can lead to superior performance, but those firms are also more likely to experience uncertainty and failures (Santangelo & Meyer, 2017).

Johanson and Vahlne's revised model considered firm outsidership to a relevant network -- more than psychic distance -- to be the root of uncertainty in internationalization, addressed by trust-building, and then knowledge creation and learning across relationships (Johanson & Vahlne, 2009). The idea that firm internationalization requires a gradual experiential learning process has also been challenged by those that argue that the availability of necessary knowledge to the firm at or before inception renders the need for such slow internationalization redundant (Cavusgil & Knight, 2015; Knight & Cavusgil, 2004; Oviatt & McDougall, 1994, and 2005). This debate has ignited a new stream of IP research and conceptualization with regards to the IP model and the assumptions that underpin it, including the key role of knowledge and learning. Considering this challenge, we review the extant literature on knowledge that internationalizing firms require and detail our current understanding of the learning processes that they might follow before considering some alternative learning approaches that have been proposed.

2.1 The Knowledge that Internationalizing Firms Require

There is a large body of prior internationalization research examining the knowledge that is important for the internationalization process. Recently the content of this knowledge has been identified as international market knowledge (of business and institutions), product/technological knowledge, and general internationalization knowledge (Eriksson, Johanson, Majkgård & Sharma, 1997; Eriksson, Majkgård & Sharma, 2000; Fletcher & Harris, 2012; Pellegrino & McNaughton, 2017; Prashantham & Young, 2011). To support the themes emerging from our study, we broadly categorize this as: specific market knowledge for market entry and development (Johanson & Vahlne, 1977); knowledge for finding and employing network relationships for internationalization (Johanson & Mattson, 1988, Johanson & Vahlne, 2003), and knowledge of how to manage international businesses (Forsgren & Johanson, 1975; Freeman & Cavusgil, 2007).

Knowledge for market entry is needed to develop appropriate market entry strategies in new territories, implement market entry decisions, and develop operations in those territories. The problems that can cause a firm's market entry to falter or fail can be associated with a host market or international market conditions or could be the result of a deficient capability to meet the needs of new customers (Javalgi, Deligonul, Dixit & Cavusgil, 2011; Welch & Welch, 2009; Zahra, Ireland & Hitt, 2000). Johanson and Vahlne (1977) identified a lack of experiential market knowledge to be the main obstacle to international operations and its acquisition to be an operational requirement (Johanson & Vahlne, 1990; Fletcher & Harris, 2012). This makes tacit experiential market knowledge a rare and valuable resource that is essential for entry into international markets (Barney, 1991).

The role of relationships in cross border transactions has been highlighted in internationalization process research from its earliest days (Johanson & Mattson, 1988, 1992; Johanson & Vahlne, 1990, and 2003; Mort & Weerawardena, 2006). Research in this area has adopted a relationship perspective (Dyer & Singh, 1998), a network perspective (Granovetter, 1985, Larson & Starr, 1993) and an international entrepreneurship perspective (Coviello, 2006; Komulainen, Mainela & Tahtinen, 2006). Relationships are developed within networks with the hope of acquiring valuable country specific (often intangible) knowledge-based resources that will support further

internationalization (Coviello & Munro, 1995, and 1997; Madsen & Servais, 1997). Firms can compensate for resource limitations (Johanson & Mattsson, 1988) by learning “how to build new business networks and connect them to each other” (Johanson & Vahlne, 2003, p. 93). Knowledge of how to explore, develop, maintain, and exploit these relationships is therefore critical to sustaining the internationalization process itself (Freeman & Cavusgil, 2007; Freeman et al., 2010; Nordman & Melen, 2008). Global supply chains actively work with manufacturing and R&D to create agile processes, recognizing the importance of knowledge and learning supported by big data (Goldsby, Zinn, Closs, Daugherty, Stock, Fawcett & Waller, 2019).

Adding international territories increases management breadth and organizational complexity. New markets require learning about product adaptation, international logistics, foreign exchange currency considerations, and transnational customs and legal knowledge (Cavusgil, 1998; Prashantham & Young 2011). Firms need to develop international management learning capabilities and acquire general internationalization knowledge if they are to effectively operate enterprises across multiple international territories (Eriksson, et al., 1997). International management capabilities involve being able to source and evaluate relevant knowledge about new international challenges, to structure and manage internationally, to implement internal structures, and procedures across borders, and to govern subsidiary and partner behaviors across international markets (Fletcher et al., 2013; Rui, Zhang & Shipman, 2016). This knowledge needs to be integrated within the firm – coordinating, absorbing, and embedding it within both existing and new procedures (Blomstermo, Eriksson & Sharma, 2004; Eriksson et al., 1997; Johanson & Vahlne, 2009; Lee, Chen, Kim & Johnson, 2008; Pellegrino & McNaughton, 2017). For example, simply knowing about credit control procedures is insufficient. To avoid overexposure to systematic credit risk on an international scale, procedures need to be developed, embedded within the firm’s IT, accounting, and reporting systems, and understood by both accounting and commercial personnel (Kogut & Zander, 1996). Organizationally, this requires a reliable source of knowledge, relationships, and procedures that ensure new learning and knowledge is shared internationally (Lee et al., 2008; Tsang, Nguyen, & Erramilli, 2004).

2.2 Learning Processes in Internationalization

Researchers examining learning process in an internationalization context initially focused on the acquisition of experiential market knowledge in new territories, identifying the importance of being able to learn about new markets and suggesting ways to use this knowledge effectively (Johanson & Vahlne, 1977). However, there are many processes at play (Vissak, Francioni & Freeman, 2020), with knowledge originating both internally and externally (Forsgren, 2002). Learning how to build relationships is thought to develop with experience over time; helping new learning partnerships to emerge (Freeman et al., 2010; Gulati, 1999; Johanson & Vahlne, 2003; Mort & Weerawardena, 2006). Experience with operational modes and foreign markets obtained from a firm's internal network impacts the firm's entry mode commitment in new foreign markets (Schwens, Zapkau, Brouthers & Hollender, 2018). For example, learning from deeper and broader international experience increases the likelihood of firms implementing more complex entry modes (Putzhammer, Fainshmidt, Puck & Slangen, 2018). Firms within emerging markets learn through their choice of entry mode and subsidiary network configuration. They may use this knowledge to increase their responsiveness to pro-market reforms in their home market (Dau, 2018).

Tacit experiential knowledge concerning firm practices must be converted into explicit objective knowledge if it is to be transferred across the firm internationally and used in both established and new territories (Basly, 2007; Karlsen, Silseth, Benito & Welch, 2003). This conversion into objective knowledge requires appropriate internal procedures and routines (Autio, Sapienza & Almeida, 2000; Fletcher & Prashantham, 2011; Prashantham & Young, 2011; Sapienza et al., 2006), a tailoring process that makes it essential procedural know-how (Hadley & Wilson, 2003; Wiklund & Shepherd, 2003). Internationalization process researchers further consider learning and the speed of knowledge acquisition to be important factors that govern the speed of internationalization. It was initially suggested that the need for experiential learning meant that internationalization had to be gradual, otherwise performance would be impaired (Johanson & Vahlne, 1977, and 1990). In line with the basic assumptions of the behavioral theory of the firm (Cyert & March, 1963), learning in early internationalization research is

assumed to be provoked only once problems are encountered. The tacit knowledge needed is difficult and time consuming to acquire, even if it can sometimes be gained in ways other than direct experience (Forsgren, 2002; Huber, 1991). Jiang et al., (2014) found that learning, specifically vicarious learning, moderates the negative influence of speed on the performance of foreign expansion, as well as the negative effect of the speed of forming foreign subsidiaries on firm survival.

It can be argued that needing to learn may not actually constrain the firm's speed of internationalization. Knowledge, skills, experiences, and networks can be developed before initial internationalization, or even before the firm's formation. This represents a stock of 'congenital knowledge' (Huber, 1991) that can be employed in internationalization without having to await experiential development (McDougall, Shane, & Oviatt, 1994). Firms can also learn vicariously from other firms (for example those in their networks) or by seeking advice from consultants and advisers, procuring experience through recruitment or business acquisition, and engaging in active research processes (Casillas et al., 2009; Fletcher & Harris, 2012; Gabrielsson, Kirplani, Dimitriatos, Solberg & Zucchella, 2008; Loane, Bell, & McNaughton, 2007; Zhou, 2007). Beyond this, internationalization process researchers have paid limited attention to the process of learning that lies at the heart of the overall internationalization process. The processes that firms use in gaining this knowledge have remained implicit, rather than explicit, in internationalization research (Forsgren, 2002). Recent research has shown that firms benefit from various sources of learning (Bunz et al. 2017; Bruneel, Yli-Renko & Clarysse, 2010; Stoian, Dimitratos & Plakoyiannaki, 2018; Fernhaber, McDougall-Covin, & Shepherd, 2009; Fletcher & Harris, 2012; Pellegrino & McNaughton, 2017; Schwens & Kabst, 2009; Yu, 2020), but less attention has been paid to the dynamics of learning (Bunz et al., 2017) and the related organizational processes (Pellegrino & McNaughton, 2017). This led us to focus our attention directly on the learning processes that managers adopt to improve their firm's internationalization performance over time.

Johanson and Vahlne (1977) discussed two ways of gaining market knowledge, namely through direct experience and by grafting on knowledge through hiring individuals or acquiring units. Huber's (1991) seminal paper on organizational learning categorizes a number of learning processes including congenial, experiential, grafting, vicarious

(including mimicking), searching, and noticing. Internationalization researchers have emphasized learning by highlighting the range of other sources of knowledge involved (De Clercq, Yavuz & Zhou, 2012; Fletcher & Harris, 2012; Forsgren, 2002; Pellegrino & McNaughton, 2015). Developments in organizational theories have been substantial, especially by those who contributed to the early developments of the organizational theory of the firm (see March & Simon 1958). For example, institutional logics, categorization, networks, performance feedback, goal orientation, and strategy-as-practice have all been used to frame our understanding (Lounsbury and Beckman, 2015). Many of these research streams address issues related to organizational learning (e.g. Crossan, Lane & White, 1999), which Levitt and March (1988) defined as the acquisition of knowledge that precedes changes to key elements of the organizational system.

Performance-feedback (P-F) shares foundations within the Johanson and Vahlne's (1977) internationalization learning process work. This process-based approach (summary example provided in Figure 1) links managers' beliefs about firm performance outcomes to the processes of organizational learning that drive change (March & Simon, 1958). Seminal research by Cyert and March (1963) includes observations which challenge the profit optimization expectations in firms. Specifically, decision makers try to adjust performance when they see their firm falling short of goals. The core assumption here is that managers only seek change to improve performance when they see the inferior existing performance. This aspect was incorporated into Johanson and Vahlne's (1977) model, in that learning within the new international territories was expected to be triggered by managers identifying problems.

The main themes in subsequent organizational learning research are based on these P-F conclusions and assumptions (Argote & Greve, 2007; Greve, 2003). Extant research has investigated many different sources for these aspirations, both internally and within other reference groups. Managerial responses to the assessment of performance vary, as have the ways that organizations strategize when performance falls short. Others have sought to identify the various learning forms adopted for problemistic searches for the sources of performance deficiencies.

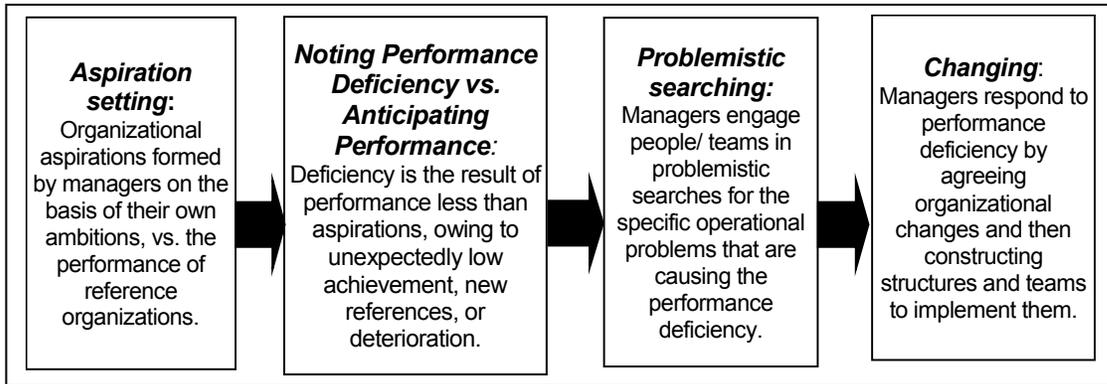


Figure 1. The Performance-Feedback Process of Organizational Learning

Source: Adapted from March and Simon, 1958

Five key elements of the P-F process are outlined in Table 1. The source of these aspirations can be within the firm (e.g. leaders) and may be historical, based on previous performance, or it can be external, based on the performance achieved by other firms. Firms can combine both internal and external performance feedback (Clough & Piezunka, 2020). Managerial acknowledgement of performance deficiency drives a process of ‘problemistic search’ in which managers identify underlying operational problems to begin a process of change management.

Examining Figure 1 and Table 1, decision makers try to adjust performance when they see their firm falling short of goals. The core assumption here is that managers only seek adjustment when they experience inferior performance. It should be noted that recent research has supported an expanded view of managerial goal orientation when considering performance. Domurath, Coviello, Patzelt, & Ganal (2020) provide evidence that managers may have different goals for their company’s learning. Importantly, profit motives may be less important to some managers who are more likely to focus on mastery with a heightened emphasis of “development and growth” beyond traditional views of performance (Kaplan & Maehr, 2007, p. 142). This means that firms may orient their organizational learning goals to ‘prove’ their learning competencies, ‘avoid’ negative assessments, or engage in mastering the “adapting [of] their business to the specific international context” (Domutath et al., 2020, p. 2). The mastery goal provides an evolving view of the dynamics of learning beyond the traditionally studied profit/performance driven adjustment. Firms that orient towards mastery may be more focused on leaning to learn across the international enterprise than learning for the sake of a specific revenue target.

Table 1. Core Concepts from Performance-Feedback Theory

Core concepts from P-F theory	Explanation of the core concept
Performance deficiency identification	A core principle of performance feedback theory is that managers act in response to their identifying performance deficiency of the firm. The basis of the deficiency in performance is comparison to aspirations.
Basis of reference for aspirations	Aspirations can come from a range of sources, for example historical performance, or the expectations of investors, advisors/ consultants, or other managers. Aspiration is often linked to the performance of reference firms, being other firms of the same type (e.g. small technology growth firms), or in the same industry.
Reason for performance deficiency	Performance deficiency can reflect recognition of one or more of three occurrences: failure to achieve to aspirations, a change in choice of reference firms (perhaps because of a change in managers or advisors with new mindsets), or deterioration of the firm in some way.
Problemistic search	Problemistic search is an internal managerial process for precisely identifying specific 'problems' within the firm that are leading to firm level performance deficiency and their operational sources, so that they can be addressed. A range of different sources of knowledge can be engaged, with people inside or outside the firm.
Organizational change	Managerial processes are engaged to agree organizational changes for addressing the problems that are identified, and groups, teams and leaders are appointed and structured to implement them.

There have been many calls for new and expanded theory to explain the organizational and managerial processes involved in internationalization (Buckley & Lessard, 2005; Welch & Paavilainen-Mäntymäki, 2014; Welch et al., 2016) and specifically of the internationalization learning process (Hult, Gonzalez-Perez & Lagerstrom, 2020). Only limited studies, however, have examined the organizational processes involved in learning, especially how these evolve as firms increasingly internationalize, with most research in the area being focused on entry mode learning (Pellegrino & McNaughton, 2017). We respond to this by investigating the different learning processes adopted by a single case firm through its entire international evolution, from its first faltering international market entries to its evolution as a fully-fledged multinational firm. The research method adopted to do this is discussed next.

3. Research Methods

3.1 Research Approach

This study employed a process approach, utilizing a single case study research strategy to investigate how the processes of internationalization and learning developed over time (Langley et al., 2013) for DPL. The case selected was a critical case (Patton, 2015), as it was considered special, having sustained internationalization, and survived over a long period of time. The logic of this sampling strategy is that it allowed deep insights into the learning processes and outcomes (Fletcher & Plakoyiannaki, 2011). DPL provided the opportunity to gather rich information on the sequence of needs for learning to engage in successful internationalization. The case provided data on how that learning took place over time, and how it led to new knowledge, processes and practices that supported survival and success in an international marketplace. Our method used fine-grained analysis of a single firm to conceptualize and extend theory. This involved constant cycling between theory and data to provide novel accounts of organizational learning across a sequence of events unfolding over time. We were concerned with development of temporal explanations and deep contextualization of the case evidence (Fletcher & Plakoyiannaki, 2011; Siggelkow, 2007). This case provided unique access and insights over a prolonged period. Bingham, Koen, Heimeriks, Schijven, and Gates (2015) have shown the value of detailed longitudinal single case study research employing process methodology and outcomes to uncover learning in market entry.

We are working in an area that has seen extensive research over the past 30 years, but significant questions remain. Assumptions can be challenged and new theoretical insights have the potential to advance our understanding (Alvesson and Sandberg, 2011). We are exploring the extent to which new conceptual ideas introduced above have relevance. As Welch et al (2016, p. 798) point out, this requires an abductive approach (Dubois & Gadde, 2002, 2014). The study answers the ongoing calls for process based IB research (Welch & Paavilainen-Mäntymäki, 2014; Welch, et al., 2016) and investigates the internationalization process with an emphasis on the extent to which new organizational learning approaches can contribute to our understanding of learning for sustainable internationalization.

This study was informed by key managers responsible for performance, international expansion, and managing problems. These executives were all the focus of organizational learning within the firm. We accessed data over crucial periods of internationalization that allowed us to draw theoretical generalizations but remain sensitive to the context and the perspectives of the managers involved (Eisenhardt & Graebner, 2007; Welch, Piekkari, Plakoyannaki & Paavilainen-Mäntymäki, 2011). To facilitate our time-based analysis of learning, we used Kazanjian's (1988) empirically derived growth stage framework which enabled temporal bracketing (Langley, 1999) to examine the learning processes at different stages of growth (Coviello, 2006).

The case firm (DPL) is a UK based firm founded in 1972 by an engineer entrepreneur. DPL manufactures high quality hi-fi equipment targeted at a global market niche. In the years up to 1999 it grew steadily, developing new products and expanding markets in the UK and internationally. The hi-fi market matured at this point, but then went into a decline, becoming increasingly competitive in the late 1980s. In 2000, DPL joined a government program that fostered internationalization learning to support a planned phase of international expansion. Between 2000 and 2005, DPL grew rapidly as it built international sales and developed into an international organization to support this period of high growth.

During the period 2006-2008, DPL's international sales declined and profits faltered (Figure 2). Though initially maintaining sales growth, sales grew more slowly than the cost of developing the business, and when sales fell in the UK and internationally, the firm suffered major losses. This led to a crisis when cash flow deteriorated. The record of performance problems questioned the survival of the firm. DPL responded quickly, securing government support to fund major internal technology development and technological enhancement. The aim was to enable DPL to do its own music streaming in-house, breaking its dependency on Far East and Silicon Valley based technology. From 2009-2015 international operations were reorganized to achieve stability, profitability, control, securing a base for future growth. International sales subsequently recovered, higher profits returned, and DPL earned a more secure and stable position with a promising outlook.

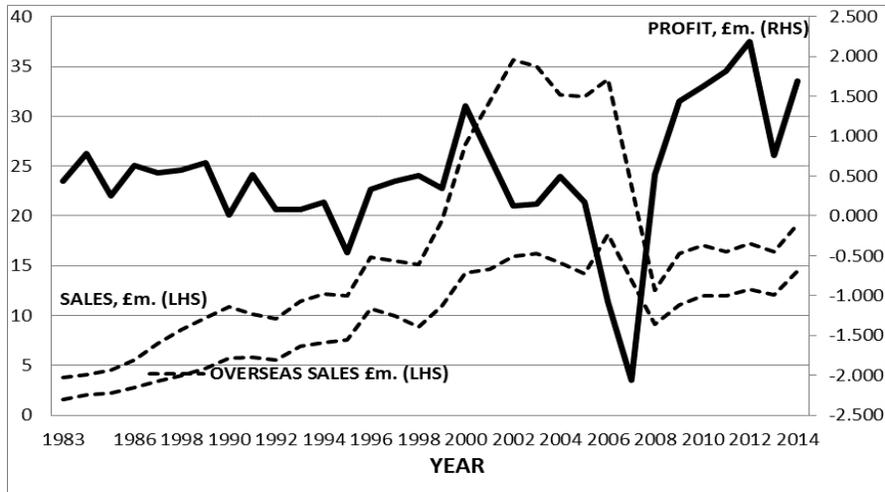


Figure 2: DPL’s Total and International Sales and Profits

3.2 Data Collection

The case protocol for data collection utilized for this study was designed to enhance the reliability of the research process (Yin, 2014). Data collection procedures were standardized within the research design to achieve equivalence and comparability between the constructs (Sinkovics, Penz & Ghauri, 2008). Following Lincoln and Guba (1985), the research design sought to establish trustworthiness and rigor through prolonged engagement with the key informants, and triangulation with multiple sources of evidence by conducting interviews over a twelve year period (2003-2015) with seven directors/senior managers and three government program advisors examining a substantial body of internal and external archival data, including media reports, minutes of meetings, board presentations, external presentations, and advisors’ report. Interviews were repeated over time to achieve data confirmation (Ghauri & Grønhaug, 2010; Yin, 2014). Advisor’s interviews and secondary data were consulted before and after each phase of interviews to check for biases in the key informant interviews. No biases were detected.

Interviews are an effective approach for collecting rich, empirical data, especially when the phenomenon of interest is “episodic and infrequent” as in our study (Eisenhardt & Graebner, 2007, p.28). Semi-structured interviews, lasting from 60 minutes to 90 minutes, were undertaken mainly at the firm’s headquarters. The interview schedules were designed to unravel the issues and the thinking of the interviewees themselves in a non-directive way, allowing interviewees to elaborate and answer questions flexibly. There

were considerable open discussions that enabled the interviewees to express their viewpoints in full, allowing the interviewers to obtain rich and detailed data on the learning and changes as they unfolded (Sharpe, 2004; Yin, 2014). Note taking was permitted during all the interviews, which were also digitally recorded and subsequently transcribed for detailed analysis. Interviews were held with the directors and senior managers leading the business, as well as with consultants and government advisors outside the firm who were engaged in the learning process.

Interviews in real time were conducted as events unfolded between 2003 and 2015, with interviews and site visits across two periods of extensive discussion and reflection, 2003-05 and 2011-15. The managing and marketing directors and the external advisers were interviewed in 2003, 2004 and 2005 as they implemented an international growth plan. Between 2006 and 2010 the company was monitored through press reports and publications, which suggested that DPL was making substantial changes in response to the internationalization challenges the firm was facing. In 2011, the CEO (son of the founder) spoke at a business school, and four further interviews with the CEO, R&D, manufacturing and sales directors, all of whom were long standing senior managers, gave a real time picture of progress and reviewed the accounts related to the firm's international development. The founder, after a period of ill health, returned to the business and was interviewed on site in 2014 about the firm's internationalization since its founding. Further data was collected in 2015 when the founder and CEO made a joint father and son presentation at a business school. A list of the event history and main data collection sources, including the archival sources, is shown in Table 2.

To avoid ex-post rationalization (Van de Ven & Poole, 1990), we accessed and combined data collected in real time with data collected retrospectively (Leonard-Barton, 1990). During the interviews, retrospective data were accumulated on the firm's internationalization activities and the challenges faced since the company's inception in 1972, until 2003. This was especially important as 1972 to 1999 was identified as one consistent early development period (see Table 2), which had many successes and failures, but which did not have significant changes in the managerial or learning approach. Reassurance came from the consistency of interviewee accounts from inside and outside the firm and secondary data.

Table 2: Timeline, event history, and data produced

Time	Growth State	Internationalization Outcomes	Data Collected
1972-1999	Conceptualization and development; commercialization	Commencement of flagship product, Product enhancement. Diversification, Foreign market entry; distributors/ sales subsidiaries	<p><i>Primary data (Retrospective)</i></p> <p>1 government advisor interview 2003 5 Company interviews 2011-2015: CEO; Sales director; R&D director; Manufacturing director; Founder</p> <p><i>Secondary Data</i></p> <p>2 Company financial statements (FAME database) Government program company profile report</p>
2000-2005	Sales, market growth and organizational development	High turnover; fast market expansion; succession.	<p><i>Primary Data (Realtime)</i></p> <p>3 Interviews with Managing director and factory site visit 3 Interviews with Marketing director and factory site visit 20 Monthly/quarterly meetings with internationalization advisors 3 Annual Interviews with regional advisors</p> <p><i>Secondary Data</i></p> <p>Published case study Minutes of program advisor & consultant meetings with DPL Consultants' case study Consultants' report on internationalization plan Financial baseline form 3 Internal annual Financial review forms 6 Financial statements (FAME database) Media reports and news articles</p>
2006-2008	Crisis and Consolidation	Extreme revenue and profits turbulence	<p><i>Primary Data (Retrospective)</i></p> <p>CEO interview Founder interview</p> <p><i>Secondary Data</i></p> <p>Published case study 3 Financial statements (FAME database) Media reports and news articles</p>
2009 - 2015	Stability, profitability and control	Consistent growth and profit; Product innovation	<p><i>Primary Data (Realtime)</i></p> <p>CEO (son of founder), Business School Presentation Founder interview Interview Sales director and factory visit Interview R&D director and factory visit Interview Manufacturing director and factory visit Interview Founder - factory site visit Founder and CEO Conference Presentation</p> <p><i>Secondary Data</i></p> <p>6 Financial statements (FAME database) Media reports and news articles DPL email alerts</p>

3.3 Data Analysis

We followed the guidelines set out for “naturalistic enquiry” (Lincoln & Guba, 1985). The research process enabled core themes, temporal aspects, patterns, and associations to be identified. The richness of the data, the multiple sources used, and the longitudinal approach allowed for high levels of data triangulation (Denzin, 1978). Categories from organizational learning, performance feedback, and internationalization process literatures were used to inform initial data coding, then data on organizational learning processes overtime were analyzed emergently and compared to extant theory. The analysis involved open coding around learning (Strauss & Corbin, 1990), revealing that some learning was gradual, reflecting the evolving experience of the firm in working internationally, but also demonstrated that most of the learning took place during specific intense periods of organizational reevaluation and change. We then examined the learning that was taking place in the intensive change periods more deeply, and the results of this analysis are presented in the findings, with the first and second order categories that were constructed presented in detail in tabular analysis (Strauss & Corbin, 1998). This was performed for each of the different phases of internationalization.

The first-order categories provide a “thick description” (Lincoln & Guba, 1985) and were extracted from the fine-grained analysis of the operational concerns and problems arising from DPL’s international growth that focused attention on the need for learning (see Figure 3). The data was coded to identify what stimulated the learning, problems, responses, and the organizational outcomes of that learning. The second-order categories are constructs of international business ‘learning themes’ based on these responses and their outcomes. They were developed by identifying and interpreting what was being learned, how it was being learned, and who was involved at each stage of the firm’s development. The results of this categorization process are presented in the next section.

An analytical process was then applied to consolidate these twenty-four learning themes, informed by prior organizational learning research, into six aggregated dimensions. These were then analytically linked and inductively developed into the three ‘learning constructs’ that represent the primary contribution of this study. This enables the learning constructs to be traced back to the specific activities of learning within the first-order categories (Figure 3 below).

4. FINDINGS

4.1 Learning Themes in DPL

The primary focus of this paper is to examine the learning processes in DPL from its initial foundation to its maturity as a sustainable international firm. In each emergent phase, we draw from internationalization process and performance feedback literatures and present the three foci of learning that emerged as essential for DPL's international development: entering and developing markets; international R&D, manufacturing, and supply chain management (SCM); and international enterprise development. In each, we show what stimulated the learning, the responses, and the organizational outcomes of that learning.

Period 1 (1972-1999)

DPL needed to develop knowledge and learning for their initial market entry, then to improve performance once market entry was achieved. The firm's early overseas market entries were into Japan (the lead market at the time) and then into the USA and Europe (Table 3). As a new firm, learning was needed to enable them to find and secure the right distributors in the new markets to exploit the opportunities opened by the firm's technological developments. This was a trial-and-error process that involved the founder assessing the distributors' performance, and then replacing those distributors who proved to not be a good fit. This method was used to achieve international sales growth and further market entries:

I wanted to sell in Japan, so I had to find out how to sell my products. A lot of that is endless slog, but the decision must be backed by (top management) commitment and that involved effort, time, energy, and money. *Founder*

When entering the market ... it was quite common that the first distributor was not the right distributor. The founding CEO went to Japan very regularly for years and years building relationships, making demonstrations, persuading people, demonstrating this ... superior product. That was the blueprint for (entering) a new market. *CEO*

The founder made frequent visits to overseas markets to recruit and manage distributors in those territories, but his international market penetration and sales growth overseas did not meet expectations. The firm found it difficult to recruit overseas distributors, as it was not well known in the marketplaces. Distributors required higher

margins than he anticipated from his experience in the United Kingdom. There were also difficulties working with distributors at a distance, as they could easily switch their attention to other brands. These substandard relationships with distributors continued despite considerable efforts to address them. Problems with distributors continued in the USA and then also in Germany. DPL's managers facing disagreements with distributors in these markets worried that they did not have the level of control that they felt necessary and equivalent to other countries. In response, the management team decided on a major direct investment, committing to set up DPL sales subsidiaries in the USA and Germany.

For guaranteed supply, DPL's early focus was on scaling up manufacturing, which it did by combining in-house manufacturing growth with outsourcing. DPL faced challenges in building greater production volumes while maintaining the reliability and quality of components supply that was necessary for their brand position. For DPL to achieve their target scale of operations, the senior management team (including manufacturing and production and R&D directors) agreed to make a major strategic change and shifted to outsourcing. Scaling up production and output to enable rapid international growth was achieved through extensive outsourcing component manufacturing to overseas suppliers. Outsourcing was also adapted to other critical functions. Although DPL's research and development was initially in-house, its rapid growth involved a huge increase in its product range, and the business had to outsource the design function and cut most of the design staff within the R&D department:

I juggle with trying to obtain the best cost price ratio for the company ... and managing the expectations and the quality requirements of my colleagues (R&D) who are trying to specify the absolutely best thing for the product. *Manufacturing Director*

The need to make changes in the way DPL operated internationally became evident to cope with international growth. Although the sales operations grew internationally, sales failed to reach the levels intended and there was a clear need to re-organize, with locally managed overseas distribution and improved overseas sales organization.

Table 3: DPL’s learning in Period 1 (P1)

Problems	Responses	Outcomes	Learning processes
<i>Market entry & development:</i> Finding right distributors: First entry in Japan, then US but with wrong distributors at times.	Frequent visits to the international market. Set up sales subsidiaries in the USA and Germany.	Need to develop partnerships to address distribution problems discovered through incremental feedback.	Slow trial and error process of experiential learning.
<i>R&D, manufacturing & SCM:</i> Manufacturing problem of scaling up production.	Outsourced extensively after discovering insufficient capacity. Hired senior R&D and manufacturing talent to manage scale-up.	Scale increased, but quality and reliability problems grow.	Experiential, trial and error learning to uncover problems. Grafting to internalize related expert knowledge.
<i>International enterprise development:</i> Slow sales growth revealed absence of network management capabilities in distribution and retailing.	Problem addressed by developing strategies within key foreign territories. Marketing channel decisions moved from home office to field.	USA and German subsidiaries select independent retailers with the hope of fixing the capabilities gap. Japan/Asia show success through collaborating multi-distributors.	Experiential learning by having managers visit overseas markets. Trial and error approach within-markets for relationship management.

DPL needed to have international management capabilities and processes in which subsidiaries overseas could undertake strategic development themselves. This need enabled a coherent global position for DPL. The managing director expressed the problem as he saw it:

We tended to look at [international markets] the same way we look at Britain and we never really achieved the expected levels of penetration that match what we have done in the UK ... by the same token I don’t think we really investigate[d] the real reasons why. *Managing Director*

In his reflection, the manufacturing director noted:

The biggest disaster [is that] we didn’t make it in America, we should have. In the last five years we were distracted in America, the market is bigger, but we weren’t successful. Success-wise Europe and the UK are stable. Most of our success is now coming out of the Far East. *Manufacturing Director*

Learning in this first international development phase of DPL was direct, experiential learning in response to deficient performance. The founder’s original vision was competing against major brands, with superior products that delivered a better listening experience. The first performance deficiencies were in the failure to achieve that position

quickly. The founder and the senior managers addressed this through a process of identifying the blockages that were inhibiting the organization's achievement of their performance aspirations in a way that closely reflected the P-F learning framework. Manufacturing and technology expertise were acquired by hiring senior managers.

Period 2 (2000-2005)

In response to spare capacity and low growth, DPL embarked on a plan of international growth in this period with the aim of becoming a major global supplier of luxury hi-fi, with components sourced globally (Table 4). For their market entry strategy, DPL continued to develop its retailer and distributor networks in new international territories and run its own overseas sales operations with subsidiary operations in the USA and Germany. However, problems had developed with sales and subsidiary management as DPL lacked the capabilities needed. DPL initially sent headquarters expats, but then experienced difficulties in finding the right people to manage the new operations locally. In anticipation of the need to acquire these capabilities, DPL planned learning to support ambitious internationalization. It participated in a government internationalization program, used consultants to develop and install systems for monitoring sales performance, and instituted a sales training program for supporting overseas sales staff and agents. DPL needed to learn about management structure and control, and develop the skills, structures and processes that would enable them to acquire information from distributors and subsidiaries about overseas sales performance.

Once the business became established, then you focus more on the kind of [sales] partner you need, rather than establishing yourself in a market. We'd been established in the United States for a long time, but the way that we sold in the United States changed dramatically depending on what stage the business is at.

CEO

With this growth, however, problems arose in maintaining the quality of components and ensuring reliability from suppliers, which threatened DPL's product positioning in the premium, high quality hi-fi market. Partners could not supply products that would meet DPL's brand positioning and quality requirements. Problems with the quality and reliability of components and product adjustments from outsourced manufacturing and R&D had been long-standing and persistent. It became apparent that

DPL did not have the managerial skills for working effectively with international partners for R&D, product development, component supply or assembly, nor the ability to manage the international manufacturing supply chain well:

[Our history with outsourcing] is a little bit about control and fear. It's never been good. Either from a flexibility perspective, from the outsourced research or design capability, or from a reliability perspective, or from the future scalability perspective. You may get the design that you wanted, you may get it for the cost you wanted, you may get it with the reliability you wanted, but when you come a year later - scalability has never been built in. *R&D Director*

Furthermore, outsourcing led to the loss of a key strength in manufacturing flexibility, and in developing new products, making it more difficult to adapt quickly with market sensitive products.

We used to have a component designed in Stockholm and manufactured in China. The distribution company in Japan would give us a forecast and the suppliers start to manufacture. And if we have a quality problem, that is difficult because the supplier in China doesn't know and we have two more shipments coming. It may look a lot cheaper to manufacture in China, but it will be more expensive. *Manufacturing Director*

To support this planned international sales growth, DPL diagnosed a need to become more market oriented and to move away from the product and production focus that it had inherited. A new manager was recruited by DPL to accelerate the change from being a technology and production-based firm to being a customer and market focused firm. A new product management system was created which included systems that fed overseas market information into products being developed and manufactured. By improving the linkages between marketing and R&D, new product development became more closely related to customer needs. The firm also realized that it needed to improve performance and profitability. DPL learnt new management skills in areas where it lacked sufficient expertise. Areas of improved included international market information systems, management procedures, supply chain, distribution, and retail networks. Alongside this, a new product development process that was customer and market oriented rather than product and competition focused was created. The marketing director analyzed the overall learning difficulty:

[The problem has been] in learning about what we need to know and who can provide that to us. *Marketing Director*

DPL invested in extensive management development, involving both headquarters and subsidiaries to develop top managers and increase delegation to middle managers. This learning involved management development training (particularly at HQ) and included wider groups of managers in the learning process, including cross-functional teams. New managers with relevant experience were also recruited to augment their existing experience with vicarious knowledge from experts outside the firm. Alongside this management development activity, the overall approach to structure and control was changed to enable the business to work more effectively in the international business setting, engaging both HQ and subsidiaries in the decision-making process:

We have introduced a managerial line across the business now which is basically about focus and clarity and taking responsibility and implementation. *Marketing Director*

To develop our managers in terms of achieving the line of vision and leadership ... structural changes have flowed through from the early globalization [program] discussions about how we should structure the business and the new executive management team. *Managing Director*

In this period, a program of learning was developed to support the major commitments that were planned in overseas territories. DPL planned the development of knowledge and capabilities for managing larger scale business with substantially greater international operations.

Planned learning to build capabilities did not follow the P-F framework, even though several severe performance failings were evident. Profit performance deficiencies were rooted in problems with the reliability and performance of components. DPL was finding it difficult to source components that were manufactured to the same quality standard as those that they had previously made themselves. Profit plans were not met as sales failed to grow in line with aspirations in the USA and other territories. As the hi-fi market began to shrink worldwide, there was a significant weakening of sales in some countries.

Table 4: DPL’s learning in Period 2 (P2)

Problems	Responses	Outcomes	Learning process
<p><i>Market entry & development:</i> Disagreements with distributors in US and Germany.</p>	<p>In reaction to poor revenue, sales accelerator program created for agents. Hired consultants to explore and build unique sales monitoring systems</p>	<p>Insufficient control of and collaboration with distributors. Feedback encourages establishment of distribution subsidiaries in USA & Germany run by HQ.</p>	<p>Vicarious learning from external consultants. Indirect learning with internationalization program.</p>
<p><i>R&D, manufacturing & SCM:</i> Problem of ensuring component quality & reliability from low cost countries. Loss of flexibility to adjust products.</p>	<p>Rethinking of outsourcing strategy. Shift to use of local suppliers who could be more flexible begins. Founder’s son recruited from large competitor for his technical knowledge.</p>	<p>Operational cost of inflexibility found to be greater than savings from benefits of local sourcing.</p>	<p>Vicarious learning from external advisors. Grafting capabilities to address problems.</p>
<p><i>International enterprise development:</i> Failure to grow as expected in the USA and Germany. Cause identified as weak sales management, information management, and leadership. New opportunity presented in Asia.</p>	<p>Leadership & management training program for home office & subsidiaries created to address lack of international management capabilities. Risk of potential failure recognized from previous experience.</p>	<p>Learning from mistakes made in the USA and Germany. Development of management capabilities in Asia is planned before entry and expansion.</p>	<p>Indirect learning from managerial education program Vicarious learning from external advisors and consultants. Learning from previous mistakes, capability development planned.</p>

Some of these problems received attention, but the responses here were less urgent. Other performance deficiencies were not addressed directly, as it was thought that they would be addressed as part of the overall planned program of learning. Later, with the benefit of hindsight, senior managers regretted that these issues did not receive the analysis and response that was needed. In part, this may have been because so much time and effort were being expended on the planned growth and on the planned learning program that had been developed to support it.

Period 3 (2006-2008)

Through the international development program, DPL developed the capability to make local market strategic choices and decisions, but profit went into negative territory in 2006 and 2007 and sales dropped significantly. The pressure was on to reduce the losses to allow

the firm to survive. DPL needed to consolidate decisively and rapidly. The management team had the confidence to halt the diversification and sales growth strategy. To stem the losses, foreign sales subsidiaries were closed, and relationships were strengthened with local overseas distributors. The parallel strategy of outsourcing supply chain activities was halted, a manufacturing joint venture was terminated, and manufacturing and product design were brought in-house (Table 5).

In servicing markets, DPL had not resolved its difficulties in running subsidiaries, and concluded that it did not have the capability for doing so. It closed its subsidiaries in the USA and Germany and went back to using retailers and distributors in these territories.

Finding the right people to run the overseas subsidiaries was a problem in the USA and Germany, we lacked capabilities to manage there and had to withdraw from these, we closed the subsidiaries there. *CEO*

We had our own distributors in the USA and Germany. We were just rubbish in tackling all the problems ... we got really good people, but they developed their own bad habits... We have brought everything back in here and we feel at this stage we can be global, without having to have offices in New York, London, etc. I think for us the big challenge probably [involves] good business practice so take our Japanese distributors in Japan, we've worked with these guys for over 20 years and nobody thought we could ever sell in Japan because of the cultural barriers etc., but we're getting the right people. After we made mistakes in America, I think we got better. *Manufacturing Director*

DPL responded to problems in the outsourcing strategy by insourcing. R&D and near-sourcing manufacturing with more reliable and flexible suppliers with whom it could build long term, close relations to ensure the quality and quantity of supplies. The emphasis was increasingly on flexibility, design, and reliability, rather than on sourcing components at lowest unit cost. The greater flexibility enabled DPL to transform its manufacturing process with a production planning system that “built to sale” rather than “built to stock”.

The shift from product focus to customer need and demand focus was followed energetically. Manufacturing and R&D teams reviewed the supply chain and production systems to support the new strategy of being customer demand led rather than production oriented. Over this period, DPL brought nearly all manufacturing and R&D back in-house, supported by suppliers where possible. This provided the quality and flexibility needed to enable the implementation of a sales responsive production and manufacturing system:

It's much easier dealing with a company with [a higher unit cost]. They are sometimes much more willing to have flexibility with you. They are typically a bit more flexible because they'll be dealing with companies the same size that you are. You might find that they're local suppliers ... they have a similar mind set to us in terms of how we deal with business, with life, what their goals are. Unlike dealing with a massive supplier anywhere in the world, whether it's American, whether it's Chinese, Brazilian because they are at the lowest cost point. *Manufacturing Director*

DPL recognized that it needed to be able to develop an overall internationalization strategy that was flexible in its response to changing international and local conditions. A lack of sales and marketing information generally inhibited the management team's ability to develop a coherent international strategy. Continued problems in the USA and in other territories indicated that DPL needed to develop its capabilities for working with international distributors/retailers, and to operate as a coordinated, sustainable international business, both at headquarters and internationally. Applying managerial processes that its managers had learned vicariously from the internationalization program, it rapidly developed leadership and management systems to support overseas sales managers, distributors, and the direct sales force, allowing them to monitor performance closely:

The plan is that the new team functions become the source of that expertise and then by gathering all the input and information and becoming a reference point then they become the real expert for what our customers are likely to require and what we can deliver. *Managing Director*

DPL's founder returned full time to the business as chairman and instituted other changes to the senior management team. The founder's son commenced studying at a leading international business school to build his skills. External consultants and non-executive directors were also engaged to support the turnaround. At the same time, the manufacturing and R&D processes were fundamentally re-evaluated by the firm's senior management.

The executive team, most of whom had benefitted from the management development program, led a fundamental review of DPL. They initially identified the most pressing problems as underperformance in overseas sales, disruptions in supply chain management, and deficiencies in organizational management. They also found that the previous growth strategy of diversification was not viable in high volume markets and had led the firm to commit resources into servicing what were now unprofitable markets.

Table 5: DPL’s learning in Period 3 (P3)

Problems	Responses	Outcomes	Learning process
<p><i>Market entry & development:</i></p> <p>Subsidiary failures; recognized absence of management skills to run overseas subsidiaries.</p>	<p>Exploration of new management structures and controls.</p> <p>Opportunities recognized from phase 2 to manage overseas operations.</p>	<p>Difficulties in subsidiaries not resolved.</p> <p>Subsidiaries closed; returned to using distributors/ retailers</p> <p>Success maintained in Japan with distributors.</p>	<p>Trial & error learning from mistakes/ failing</p> <p>Learning from observation of success</p> <p>Grafting capabilities where deficiency is experienced.</p>
<p><i>R&D, manufacturing & SCM:</i></p> <p>Significant problems with outsourcing of R&D and manufacturing</p> <p>Manufacturing flexibility, quality, and reliability lost.</p>	<p>Manufacturing outsourcing reduced.</p> <p>R&D taken in-house and supported by own technology</p> <p>Built cross-functional teams to address problems quickly.</p>	<p>Opportunity oriented design system: flexible, reliable, scalable</p> <p>New cross-functional teams accelerated problem diagnosis & change.</p>	<p>Enhanced focus on internal learning & change of pace</p> <p>Problem focused cross-functional teams to react to existing problems.</p>
<p><i>International enterprise development:</i></p> <p>Technology/ Product focus employed rather than market focus.</p> <p>Disconnect between market opportunities and undistinctive products.</p>	<p>New product management function</p> <p>Director hired to focus product development.</p> <p>New process to use foreign market information in product development</p> <p>Founder returns to energize new focus on innovation.</p>	<p>Move from a production focus to customer value focus.</p> <p>Design provides clear lead in the creation of niche products and profitability.</p> <p>New flow of distinctive product ready for market.</p>	<p>Leadership training focuses on future knowledge acquisition</p> <p>Grafting additional management capability through recruitment.</p> <p>Organizational restructuring and processes to facilitate knowledge flows.</p>

The subsidiaries had persistently failed to meet their objectives. Both local recruitment and sending head office managers overseas had failed. It became clear that the problem was that DPL did not have the managerial skills and capabilities needed to run greenfield direct overseas sales operations or to deliver the growth strategy being pursued. The teams discovered that components sourced internationally had extremely long lead times and concluded that the outsourcing strategy was inconsistent with the firm’s desire to be more market and customer focused. Ultimately, outsourcing arrangements were simply not flexible enough.

The process of learning that took place in this period clearly followed the P-F learning mechanism. While the planned learning program undertaken in the growth period had developed the managerial capabilities of the team, this was insufficient to deal with the

deficiencies caused by unanticipated problems. The survival of the business required urgent new learning. DPL combined and integrated learning from a variety of sources, including senior management education, vicarious learning by hiring staff, and consultants and advisors to provide additional support.

Period 4 (2009-2015)

As DPL recovered, the firm's learning involved succession planning and management restructuring. The founder worked to transfer knowledge to his son, who became the new CEO in 2009. Two major learning processes were implemented. Teams assumed responsibility for problem solving, reporting back to senior management and the non-executive directors recruited in Period 3 provided expertise and objectivity (Table 6).

When developing its operations in Japan, DPL learned from its mistakes in managing distributors. The outcome was successful multi-sourcing. In response to falling global sales and increasing losses, DPL pulled back into its most profitable international markets. The management team redefined its niche position to become a music technology manufacturing business focusing on digital streaming. DPL would thus aim to provide a high-quality music experience in the home to a niche market group of people worldwide who had exceptional quality music listening as their passion. DPL employed a global niche market focus strategy that was better aligned with its history, brand identity, and long-established capabilities.

The performance of the distribution networks in different international markets were continuously appraised and local marketing strategies were developed for each territory. This involved working closely with distributors and developing long-term relationships - occasionally acquiring them if there was the opportunity to do so. Having extended its distribution network to support its growth, the firm was now adapting these in response to the performance deficiencies. DPL's senior managers learned how to understand different conditions in new markets, and to approach its entry into new territories in different ways that were appropriate to each. For example, the trend in Europe was towards direct sales rather than using distributors. This made it easier for DPL to export directly in Europe. In East Asia, a sole distributor model was not viable in Japanese or East Asian market conditions, so a multi distributor model was adopted. With the help of

consultants, DPL adopted different approaches in the USA, Europe, Japan, and other Asian markets. It continued to respond and to learn from its experiences in new market entries. DPL's later market entries, especially in Asia have reflected this and have become successful.

Because as (the market in) Europe and the West declines, we need to build more business in Asia, and so if the trend in Europe is towards direct business and away from distribution, the trend in Asia is towards distribution. And we now have distributed in places like Thailand, Vietnam, Indonesia, Korea, Taiwan, Malaysia, Singapore, you know all these places we now have business partners.

CEO

By 2009, DPL manufacturing had moved in-house or into nearby collaborative firms. R&D was totally in-house, with products selling at a premium position based on unique, proprietary technologies designed and developed within the business.

As soon as we started to consolidate, we've been in-sourcing more and more. We want to have more control of component parts and processes. That was a huge influence in the selection of technology... the Scottish Enterprise program ... helped fund a huge piece of internal technology development that broke our dependency on a huge amount of Far Eastern and Silicon Valley based technology. And so, there was a huge step in consolidation. *CEO*

Table 6: DPL's learning in Period 4 (P4)

Problems	Responses	Outcomes	Learning process
<i>Market entry & development:</i> Problem of different conditions in different overseas markets.	Anticipated adaptation of customized approaches to overseas markets. CEO promoted to focus on creating new markets.	Developed an evolutionary multi-distributor network in Japan/Far East.	Internal learning and project teams drawing on knowledge and skills from across the business.
<i>R&D, manufacturing & SCM:</i> Outsourced research and design functions expected to reduce the potential for distinctive or unique product opportunities.	In-house development of technology, to support new product strategy.	Increased control of R&D processes.	Opportunity focused cross-functional teams developed to anticipate product changes to fit market needs.
<i>International Enterprise development:</i> Inflexible production system not able to deliver products that could be profitable.	New production planning process for sales order generated production with in-house design and manufacturing	Marketing oriented opportunity development including customized offerings for premium prices.	Task teams act as internal knowledge experts connecting senior management, directors, and non-executive directors to market changes.

The overall management approach changed. DPL closed its USA and German subsidiaries, switching to using independent retailers in those markets. A joint venture with a car manufacturer that was underperforming was terminated. DPL learned from its mistakes in the USA and Germany when expanding internationally into East Asia. It exploited its management reputation and developed market knowledge capabilities before growing in the new markets. This expansion was highly profitable. With sustainable success evident in Japan, the firm returned to overall profitability. Future expansion focused on the Asian growth market.

DPL abandoned its previous aspiration to become a global mass market product business and it no longer tried to achieve international sales growth in the mass high quality hi-fi market. Instead, it aimed to generate sustainable profits and cash flow. The management team pursued a new vision for the future of the business. In 2010, it invested heavily in R&D to support this and developed a digital streaming playback system in-house to create studio quality master recording. This new technology enabled DPL to return to its core values of providing a high-quality music experience for customers.

The reason why we were struggling in the late 90s and 2000s is that our production methods were all wrong, we were trying to build [to] stock and build against the forecast. Sometimes to simplify is the hardest to do in any system.
Manufacturing Director

In Period 4, DPL's learning involved planned management learning through the promotion of the founder's son to CEO. Business education in Period 3 supported his efforts to develop and implement a new strategy for the business. In addition, the CEO and the founder, in his new role as chairman, supported by close advisors and consultants ensured the P-F processes were in place within the firm to anticipate and respond appropriately to market changes and conditions. Thus, DPL had learned to combine planned and P-F learning effectively.

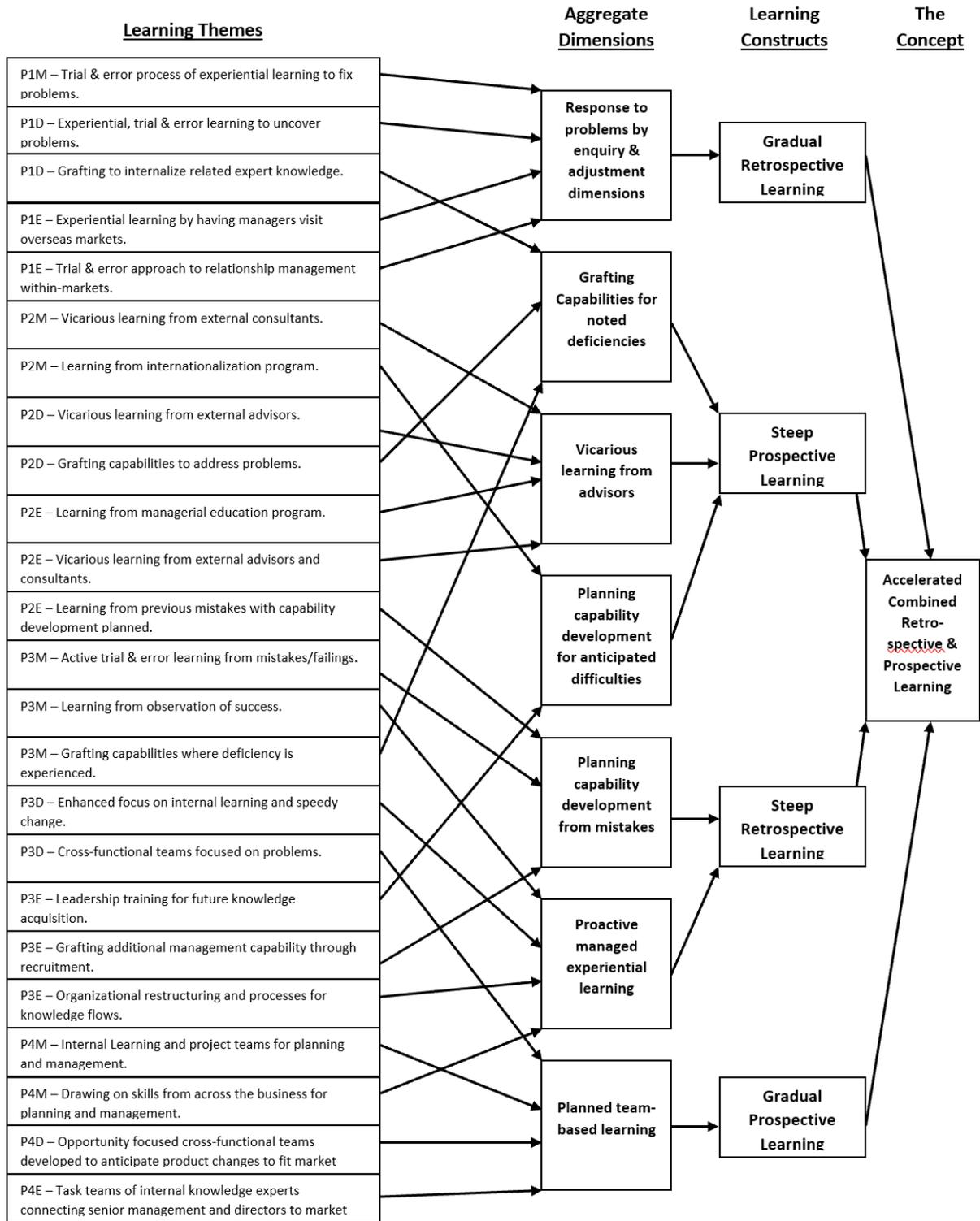
4.2 Developing the Learning Process Constructs

In this section we advance the above investigation of the learning processes into aggregate dimensions and learning constructs, as shown in Figure 3. Four contrasting constructs representing approaches to learning for internationalization are identified. We distinguish learning to be either *gradual* (slow, incremental, and passive) or *steep* (fast, intensive, and

proactive). These are considered in relation to retrospective and prospective learning next. In Period 1, learning took place gradually in response to events and as problems evolved. Learning involved careful examination of performance and retrospective learning from the experiences and outcomes. We call this *gradual retrospective learning*.

New accelerated growth ambitions drove managers urgently to participate in an international business development program in Period 2. Much of the overall development of DPL's capabilities in learning about different international markets centered on reorganizing its international supply chains and in developing its overall international management capability. This took place in a planned program of rapid organizational learning. This learning approach was not of the retrospective type, rather this was planned to develop capabilities that the firm expected to need in the immediate future. We call this steep prospective learning. The failure of the firm's rapid growth plans meant that DPL had to change rapidly to survive in Period 3. The previous learning program had expanded the capabilities of the managers to work internationally but was not designed to meet the kind of acute problems that were threatening its survival in 2006. In addition, DPL continued steep prospective learning (e.g. by training and hiring) and the managers undertook a period of especially intensive and reflective learning to identify and address the acute failures in performance: we call this *steep retrospective learning*.

New programs for proactive prospective learning were planned and implemented in response to new performance aspirations for the firm as they evolved. This began during Period 3 and continued throughout Period 4. In Period 4, DPL blended its prospective learning approaches with retrospective learning approaches, institutionalizing a process to suit the way that the business operates. These two approaches to learning worked together synergistically accelerating learning and addressing both experienced and anticipated problems. Over time, we see the firm developing steep retrospective learning in response to changes in the international marketplace and *gradual prospective learning* that supports the firm's aspirations and international development in line with the firm's resource base and capabilities.



Note: P1 – Period 1 P2 – Period 2 P3 – Period 3 P4 – Period 4
M – Market entry & development D – R&D, manufacturing & SCM
E – International enterprise development

Figure 3. Learning process constructs and learning themes

The fine-grained data analysis presented allows us to examine how these learning approaches differ across the four areas of learning over the four periods in an international business context. As noted earlier, these include market entry and development; R&D, manufacturing and SCM; and international enterprise development (Table 7). DPL experienced greater urgency for learning in the R&D, manufacturing and SCM activities during the early years. This reflects the innovative characteristics of DPL's products, the learning focus of the technology personnel, and the organization's drive towards product and manufacturing innovation. It is reasonable to expect that when it comes to R&D, manufacturing and SCM activities, gradual learning is too slow for high technology and fast-moving international markets.

Two clear and theoretically generalizable patterns are revealed here. First, the learning processes can be engaged at different times and in different areas of learning need, and they can operate in parallel with and in combination with one another. Second, which of the four learning processes is engaged, and how, depends on the particular learning need perceived at the time, the urgency of the learning need (perhaps reflecting the speed of internationalization), and the specific learning capability to undertake the particular learning process that is then needed. DHL's gradual retrospective learning dominated when the problems were unanticipated, in the early phase of the firm's development when the management team did not know what to expect in new market entry, and when facing the need for rapid adjustment and recovery. Over time, DPL engaged in steep prospective learning as it developed plans to grow rapidly and internationally. In responding and recovering from the mistakes learned, it developed a pattern of learning that combined steep retrospective and gradual prospective learning to support its continued international sustainability. Notably, by phase four, DPL combined gradual prospective and steep retrospective for entering and developing markets, however having acquired resources and capabilities for R&D, manufacturing and SCM, and international enterprise development, only gradual prospective learning was needed.

Table 7: Learning process in different aspects of internationalization

Phase	Market entry & development	R&D, manufacturing & SCM	International enterprise development
1	Gradual Retrospective	Steep Retrospective Steep Prospective	Gradual Retrospective
2	Steep Prospective	Steep Retrospective Steep Prospective	Steep Prospective
3	Steep Retrospective Steep Prospective	Steep Retrospective Steep Prospective	Steep Retrospective Steep Prospective
4	Steep Retrospective Gradual Prospective	Gradual Prospective	Gradual Prospective

5. Discussion: Retrospective and Prospective Learning

Retrospective learning matches the assumptions and orientations of P-F research and its underlying theoretical position within Cyert and March's (1963) behavioral theory of the firm. In sharing the theoretical traditions of Johanson and Vahlne's (1977) learning model of internationalization, retrospective learning is similar to the type that is implicit in the Uppsala Model. It follows the observation of a failure (to meet the aspirations held by the managers), diagnosis of its causes through 'problemistic search', a period of learning, and the institutionalization of a new structure and/or strategy for the business. DPL's CEO illustrates this learning process in practice:

Probably the main learning is the idea that you could have a sole distributor for your brand. Because in the beginning, I think the thought process was we want a distributor who's going to give us 100% attention. But lately, we realize the kind of distributor doesn't have the scale, the power and the market to give us success. Now we choose large multi-brand distribution, that's a major departure. [We learned we needed a] dedicated sales team, service team and independent retailers that are not just the same stores that do the other brands. And so, that has been a big shift in learning, how to switch to larger more powerful distributors, but still get what's called focus and attention from that distributor. *CEO*

The retrospective learning that dominated during the early development of the firm was gradual. It occurred during periods of organizational evaluation and adjustment when the performance was deemed to be deficient in comparison to aspirations. However, when poor performance threatened the future of the firm, DPL's managers then pursued the learning process rapidly and energetically. The outcome was a series of rapid and sometimes dramatic shifts in organizational focus and strategy without which the firm may

have failed. We can clearly distinguish between the gradual retrospective learning of the early years, and what we call steep retrospective learning in the later years.

There was another learning process at play throughout much of the firm’s development phase. This learning process was fundamental for expanding the firm’s knowledge and capability base and ultimately its ability to undertake more effective and speedy retrospective learning. As a firm that had international experience from its earliest days, DPL’s management did not expect internationalization to be easy. DPL’s managers anticipated and planned for this and performed activities that are not factored into P-F learning. This learning reflects the evolving experience of DPL in working internationally, but within a planned program of learning that was developed in anticipation of knowledge needs that were expected to arise because of new internationalization commitments:

We knew we needed to develop the people processes internally that made sure that they were doing the right thing and monitored and planning properly. We used a consultant that came highly recommended... They are specifically sales implementation training people ... they take your strategy and work through with you how you are going to implement that strategy with your salespeople. Basically, all our sales guys, account managers have been trained ... but we also extended that to key ... overseas distributors. We supported the training of our own direct sales force in America, Germany and Australia. *Marketing Director*

This other form of learning was used by DPL consistently throughout most of the business’ development process and almost exclusively in its growth phase. We call this *prospective learning* because it responds to commitments being made or which are planned. It is not a behavioral response to problems of the past so much as a behavioral response to problems that can be anticipated and foreseen (Bresman, 2013). Figure 4 contrasts the prospective learning and retrospective learning processes.

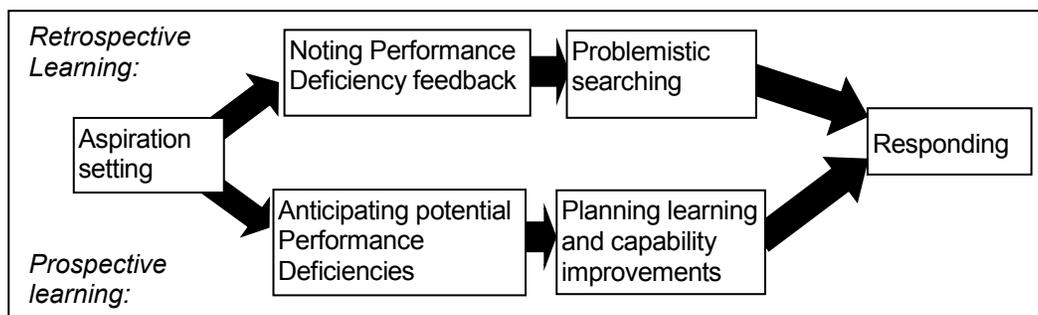


Figure 4. Retrospective and Prospective Processes of Organizational Learning

Prospective learning follows behavioral theory for the firm's principles, but with one specific extension; it indicates that managers do not only react to observed problems. They also anticipate problems and plan changes. While these anticipations are invariably inaccurate, DPL learned how problem-ridden internationalization could be. It developed management capabilities that included learning programs, consultant engagement and targeted recruitment before or alongside its planned internationalization commitments. This learning addressed the supplier and distribution arrangements and the international management of the organization rather than market entry and development. To enhance its capabilities, DPL acquired vicarious learning from advisers and consultants, it grafted on knowledge and expertise through recruitment, and it trained existing team members (Huber, 1991). These learning processes, shown in Table 8, worked together to accelerate international growth.

Table 8: Overview of the four learning processes identified in DPL

Learning Process	Managerial Approach	Managerial Conduct	Characteristics of Knowledge Stocks	Characteristics of Knowledge Flows
Gradual Retrospective	Passive review of feedback concerning past inefficiencies and ineffectiveness.	Reactive decision making from examination of feedback about past events in the firm's history.	Incremental linear accumulation of general market and operational knowledge based on past experience.	Slow, Problemistic, Trial and Error, General, Operational & Surface Level.
Steep Retrospective	Active assessment of current performance and of future developments.	Active decision making through enquiry and audit of performance in real time.	Use of specialists and functions with varied operational knowledge to pinpoint and predict problems quickly.	Fast, Problemistic, Planned Trial and Error, Deep, Operational and Strategic.
Steep Prospective	Active exploration of opportunities based future needs and wants.	Proactive decision-making anticipating future needs in specific contexts and markets.	Cyclical acquisition of specific market and operational knowledge based on anticipation of what will happen.	Expedited, Deterministic, Planned, Specific, Strategic & Deep.
Gradual Prospective	Development of aspirations for sustainable growth.	Proactive decision-making in line with firm resources and capabilities.	Incremental accumulation of firm-wide expertise.	Planned, Integrated, Combined.

DPL's plans were rarely realized as expected because the environment, the competition, or the collaborating suppliers/distributors did not perform as expected. When addressing the substantial crisis it faced in Period 3, DPL had to learn from its mistakes very rapidly to survive. The overall learning orientation of the company led it to set up cross-functional working teams to adapt failing processes, formulate responses, and institute new approaches. DPL's experience allowed it to build upon its existing steep prospective learning program, enhancing opportunity and market readiness. Experience has shown DPL that gradual learning from failings is insufficient for survival in a demanding international environment and its retrospective learning is now steep, not gradual.

The Roles of Retrospective and Prospective Learning

This study and its underlying theoretical framework illustrate the different and complementary roles of retrospective and prospective learning for an internationalizing firm. Both retrospective and prospective learning have their own benefits and limitations, as well as their own distinctive and important roles in the internationalization process. Rather than being competing types of internationalization learning, or competing conceptualizations of the learning processes involved, these constructs are complementary processes that build on the underlying theories of the firm that Johanson and Vahlne (1977) employed in their original proposal of internationalization as a learning process.

Responsiveness is necessary because not everything inside or outside the firm can be predicted or planned (see Table 9). Responding to problems through learning is the mechanism by which retrospective learning operates. Retrospective learning is essential when unanticipated problems are faced and, as in DPL's case, some of this may be necessary for the firm to survive. As is likely in most internationalizing firms, DPL encountered unanticipated difficulties with international growth, and to survive it had to engage in emergency periods of retrospective learning that resulted in extreme changes and reorientations of the business. This retrospective learning is likely necessary for the continued performance of firms adopting internationalization risks. As DPL matured, it learned enough about international operations to be able to plan future challenges and identify sources of knowledge and learning that would enable DPL to meet them.

Table 9: Benefits and Limitations of Retrospective and Prospective learning in the Internationalization Process

	Retrospective learning	Prospective learning
Benefits for the Internationalization Process	Responsive to what is happening in the firm; necessary for survival Feeds current experience into the learning process.	Knowledge can be implanted, and capability developed before major commitments are made, reducing liability of foreignness risks.
Limitations for the Internationalization Process	May fail to implant essential managerial capabilities that can be predicted to be essential for long-term firm development.	Plans may be erroneous, and circumstances may change, may distract from learning that is essential for immediate survival.

Prospective learning is complementary to retrospective learning because the enhanced managerial capabilities that it fosters means that the managers are better able to diagnose problems and can thus address them with greater speed and improved effectiveness. For DPL, this was critical for the evolution of steep retrospective learning that has been fundamental to the later development of the firm. In addition, as DPL acquired deep learning capabilities, there is a progression towards gradual prospective learning where planned learning is sourced primarily from the knowledge base within the firm. This enables the sustainable internationalization of the firm, supported by its resources and capabilities.

6. Conclusions, Limitations and Future Research

Internationalization is high risk for firms (Sapienza et al., 2006), and many firms fail (Jones, Coviello, & Tang, 2011; Welch & Luostarinen, 1988). Unsurprisingly, many international business failures tend to follow new market entries (Prashantham & Young, 2011; Zahra & George, 2002; Zahra, 2005a). The internationalization of firms is rarely linear (Chetty, 1999; Welch & Welch, 2009) and learning is fundamental for success in internationalization (Freixanet & Renart, 2020). We still have limited understanding of how learning should be managed, especially in the context of internationalization, in periods of failure, and in progression or non-progression settings (Bunz et al., 2017; Casillas et al., 2009; Eriksson et al., 1997; Fernhaber et al., 2009; Johanson & Vahlne, 1977, and 2009; Johanson & Wiedersheim-Paul, 1975; Nordstrom & Vahlne, 1992; Pellegrino & McNaughton, 2017). This study has identified how the managers of DPL, a

sustained international business, learned during periods of rapid internationalization, de-internationalization, re-internationalization, international strategy shifts, revised global ambitions, and significant management changes.

The internationalization learning process is dynamic. We can therefore expect firms to learn in different ways, follow different learning methods, and change how they learn over time (Bunz et al., 2017; Pellegrino & McNaughton, 2017). Our study makes five contributions to the field. First, our analysis shows how a firm's sustained internationalization success is reflected in its ability to integrate and combine four different constructs of learning with managers pursuing a multi-faceted approach to knowledge accumulation over the different phases of internationalization (Freixanet & Renart, 2020; Pellegrino & McNaughton, 2017). Second, we detail the dynamic sources and pace of learning arguing against the assumption that learning for internationalization is largely slow, retrospective, and experiential. Third, experiential learning remains important, but dynamic sources of knowledge and a nonlinear learning process are essential (Yu, 2020). We show that accumulating experiential learning may lead to increased commitment to an international market (Pellegrino & McNaughton, 2017), but that grafting foreign market knowledge speeds learning for growth and market entry. Firms may both plan and react to the learning needs of their competitive environment by incorporating different sources of knowledge. Fourth, we show how SMEs such as DPL that face limited resources increase foreign market commitment in new markets while sustaining internationalization over a prolonged period (Freixanet & Renart, 2020; Schwens et al., 2018; Stoian et al., 2018). Finally, we show how managers can increase their chances of success by paying attention to learning, treating learning as a source of value within and across the firm, and establishing learning processes early on to proactively learn and manage knowledge. The contributions above are all relevant to our present and future understanding of the internationalization learning process.

Research employing process theories and methodologies has been in great demand as guides towards developing our understanding of the internationalization process (Welch & Paavilainen-Mäntymäki, 2014), but process research is difficult to undertake (Langley et al., 2013). Such studies face significant limitations, particularly when it comes to their scope for empirical generalization and the fact that growth trajectories of internationalizing

firms depend on their early activities as well as many other elements (Zander et al., 2015). Although we cannot generalize context and practice from our case to others, we aim to contribute to theory, specifically regarding the learning processes involved that supports a successful and sustained internationalizing firm over time. We acknowledge that our single case study lacks generalizability to all business settings as the research focused on an SME, and therefore its applicability to large firms may be limited.

Our contributions uncover relevant developments in organization learning theory, specifically in IP research (Boyle & Shapira, 2012; Greve, 2003; Katila & Ahuja, 2002; March & Shapira, 1987). Drawing from P-F concepts (March & Simon, 1958), the organizational learning processes of Huber (1991) and the data collected in this longitudinal process study adds clarity to the understanding of learning and the internationalization process. Fine-grained analysis enabled us to identify and develop four broad constructs for learning for internationalization: Gradual Retrospective Learning, Steep Retrospective Learning, Steep Prospective Learning and Gradual Prospective Learning. We have shown how the sustained success of the case study firm's internationalization operations is reflected in its capability to integrate and combine the different forms of learning, each of which serve different purposes, and developed overtime, working together to accelerate the internationalization learning process. Furthermore, we build on the work of Freixanet and Renart (2020) and Pellegrino and McNaughton (2017), and show the interplay of the accumulation of resources and capabilities on learning and international commitment and that the speed of learning will vary and be contingent on the knowledge being acquired.

The way that firms learn will inevitably differ. The presumption that internationalizing firms can only learn in a slow, retrospective way that would certainly constrain their speed of internationalization can reasonably be questioned. To date, there has been little research into how firms undertake their internationalization learning, especially as they internationalize, and we can therefore expect them to do it in different ways, follow different mechanisms, and change how they do it over time (Bunz et al., 2017; Pellegrino & McNaughton, 2017). The findings of this study show that this avenue of enquiry improves our understanding of the dynamic internationalization process at the firm

level. It addresses how managers might usefully pursue a multi-faceted approach to knowledge accumulation over the life cycle of an international enterprise.

Our study supports the call for new studies concerning the dynamics of organizational learning in the internationalization process (Bunz et al., 2017; Pellegrino & McNaughton, 2017). Researchers should be encouraged to drill down into specific learning stages beyond entry periods in the international process to quantify and map behavior. Studies could examine what triggers steep and gradual processes to emerge, what individual skills support different stages, and what intelligence bases influence better outcomes. Specifically, researchers could examine how routines are developed to capture the tacit knowledge gained through the different learning processes. At the strategic level, researchers also have many new questions to ask. Some are embedded in past theory. For instance, what types of outsiders accelerate the process? Which types of learning are better suited for the exploration aspects of internationalization, and which for the exploitation aspects? How does the psychic distance between insiders and outsiders influence learning after entry? Are learning stages shortened or lengthened (influenced) by multinational reach, supply chain complexity, knowledge spillover effects, and headquarters location/structure. Are there instances where prospective learning contradicts retrospective learning and how does the firm prioritize this trade-off? There is also a significant opportunity to examine the role of technology (systems) within our internationalization learning contribution.

Managers and policy makers can learn from this study. Overall, they should know that learning becomes more dynamic following entry and that firms will need to navigate steep and gradual periods across the life of the business. Firms should also work to be both prospective and reflective if they hope to accelerate their learning and build their knowledge base. Ultimately, executives should know that achieving superior internationalization performance through learning requires adjustment responsiveness, grafting of capabilities, vicarious learning from experts, developing the ability to anticipative disruptions and opportunities, learning from mistakes, and -- of course -- experiential learning. Addressing these dimensions of learning should position the internationalizing firm for survival and long-term success. Policy makers should note the important role they play in building support systems for retrospective and prospective

learning towards internationalization. Incubators, think tanks, and enterprise support groups should be developed to assist in prospective learning. Opportunities should be provided to assist firms in learning about new market opportunities and innovative process improvements. Best practice conferences, audit tools, and restructuring support would greatly assist firms in retrospective learning. Any opportunity to reflect on past performance with experts and peers will facilitate learning. Ultimately, policy makers are encouraged by this study to support both retrospective and prospective learning to help firms internationalize in the most efficient and effective manner. Doing so has the potential to improve firm performance, employee job security, tax revenue, shareholder value, risk exposure, customer satisfaction, and waste reduction.

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