International organizational performance: the influence of congenital learning and realized absorptive capacity

Abstract

Purpose

This paper analyses the relationships between congenital learning and realized absorptive capacity and tries to identify whether absorptive capacity impacts on international organizational performance in today's global business environment.

Design/methodology

The research model and hypothesized relationships are empirically tested using the structural equation modelling approach, validated by factor analysis of 128 SMEs in the UK telecommunications sector.

Findings

Our findings suggest that, in order to achieve higher levels of realized absorptive capacity, managers need to create and support a congenital learning process. Furthermore, if an SME does not achieve the required realized absorptive capacity then international organizational performance is likely to deteriorate.

Originality/value

SMEs need to provide and support a learning process, which is customised and based on three sub-processes: 1) the framework for transferring knowledge; 2) the framework for transforming knowledge; and 3), an open organizational context. Based on these results, transferring and transforming are important sub-processes but are not sufficient for updating congenital knowledge.

Keywords: Congenital learning; international organizational performance; realized absorptive capacity.

1. Introduction

Increasing internationalization in all industries has given rise to an increasing number of small firms operating in the international market place. Small Medium Enterprises (SMEs) are internationalizing more rapidly and earlier than before and this has generated a growing interest in understanding how these firms gain sustainable competitive advantage. The key decision maker and the key influencer of an SME's future growth and development path is often the firm's founder (Romano *et al*., 2001; Haveman & Khaire, 2004). The knowledge provided by this person is suggested to be one of the most important success factors for SMEs (Shane *et al*., 1995) and underpins the firm's international behaviour in terms of: the selection of foreign markets; the approaches to market entry; and the speed of the market launch (Haveman & Khaire, 2004; Freeman *et al*., 2006; Freeman & Cavusgil, 2007). Furthermore, the influence of the founder's knowledge on internationalization can be observed at the level of the individual employee, the organisation and the inter-organizational network (Hamel, 1991; Gibb, 1997; Laanti *et al*., 2007). Finding some way of transferring and transforming the founder's knowledge in order to make it available to managers and employees of the firm is important and failure to do so is likely to have a negative impact on the internationalization of the SME (Shane *et al*., 1995; Madsen & Servais, 1997).

One possible explanation for the numerous failures in the internationalization planning of SMEs relates to the fact that the majority have used founder's knowledge without absorbing the nature and extent of this knowledge (Fosfuri & Tribó, 2008). This can be considered from the perspective of realized absorptive capacity (RACAP) which includes a firm's capability to develop and refine the routines that facilitate the combining of existing knowledge and newly acquired and assimilated knowledge (Zahra & George, 2002; Zahra & Hayton, 2008). This transformation capability in RACAP is supplemented by an exploitation capability which is the capability of a firm to deploy the newly acquired knowledge in product or services and realize a financial benefit.

These ideas illustrate that, in order to strengthen an international outlook and positively influence international organizational performance, an SME must be flexible when configuring and combining knowledge in a way that is appropriate for delivering value to the firm and be effective in updating the actual knowledge of its employees. The concept of congenital learning is useful in this context in that it relates to a firm's ability to prepare the ground for the creation and application of new knowledge and new knowledge structures (Cegarra & Wensley, 2009). Congenital learning also provides a framework for modelling how suitable knowledge may be absorbed in order to strengthen international organizational performance. This process will help those SMEs seeking to enhance international organizational performance via the founders' knowledge (Hamel, 1991; Gibb, 1997).

Our study builds on existing research that emphasises the relevance of congenital learning for firms and provides an analysis of the interaction between RACAP, congenital learning and international organizational performance. In particular, we develop hypotheses that focus on the manner in which congenital learning affects RACAP directly and how RACAP has an impact on international organizational performance. These hypotheses are evaluated using a survey of 128 SMEs in the UK Telecommunication sector. The sub-processes that characterise the congenital learning process and the components of RACAP are discussed in detail in the second section of this paper. Details of the survey which was used to collect appropriate data to test the models is presented in section 3, whilst the results of testing the models are presented in section 4, followed by a discussion in section 5.

2. Conceptual Framework

2.1 Absorptive capacity

In SMEs, the founders or owners are in most cases the managers, which implies that they become the key drivers for knowledge management adoption, assuming of course that they do appreciate the importance of external knowledge (Chen & Hatzakis, 2008). Hence, with this in mind, many founders wish to implement knowledge management structures (e.g., absorptive capacity and congenital learning) as they view the acquisition and application of external knowledge as vital and beneficial to the organization (Cegarra & Wensley, 2009). As Wong (2004) indicates, in order to organizational survival, developing the means for effective knowledge sharing is crucial for SMEs. It should be also noted that congenital learning involves the combination of recovered knowledge (i.e., knowledge transfer and transformation) and updated knowledge (i.e. open organizational context). Encouraging participation is important in fostering the spirit of teamwork among employees to ensure that accurate knowledge is able to reach the right individual at the exact time, which is the true goal of the congenital learning process initiative within SMEs (Cegarra & Wensley, 2009). This will inevitably promote the founder's participation in promoting a congenital learning process, not only for external knowledge but also for crucial knowledge to further increase competitive advantage (McAdam & Reid, 2001).

The concept of absorptive capacity has been defined as a firm's "ability to recognize the value of new information, assimilate it, and apply it to commercial ends" by Cohen and Levinthal (1990). Absorptive capacity relies on both external connections and internal social networks. Studies have addressed the importance of social networks in the internationalisation of SMEs and have found these to be of great significance (Loane & Bell, 2006; Kenny & Fahy, 2011). In fact, studies indicate that without exploiting resources in the network, many international ventures would not have materialised (Karra et al., 2008). Absorptive capacity uses the organization's internal experience, expertise and processes in order to interpret the meaning of the external knowledge and to exploit it to generate innovations. Kim (1998) understands absorptive capacity as the learning ability and problem solving skills that enable a firm to assimilate knowledge and create new knowledge. Consequently, absorptive capacity is a function of the organization's existing resources, existing tacit and explicit knowledge, internal routines, management competences and culture (Gray, 2006). Overall, absorptive capacity results from a prolonged process of knowledge accumulation combined with a high ability to recognize and appreciate new knowledge and enables innovation.

Zahra and George (2002) have advanced our understanding of this process by proposing the existence of two subsets of absorptive capacity (i.e., potential and realized). Potential absorptive capacity (PACAP) refers to the capability to acquire and assimilate external knowledge while realized absorptive capacity (RACAP) reflects the firm's capacity to leverage absorbed knowledge and transform it into an innovation outcome such as new goods and services (Spender, 1996; Purvis *et al*., 2001; Fosfuri & Tribó, 2008). In this paper, we focus on the combination of factors that facilitate the capability of the organization to transform and exploit existing knowledge (i.e. RACAP). On the one hand, transformation is "a firm's capability to develop and refine the routines that facilitate combining existing knowledge and the newly acquired and assimilated knowledge" (Zahra & George 2002, p. 190). On the other hand, exploitation refers to "a firm's ability to harvest and incorporate knowledge into its operations" (Zahra & George 2002, p. 190).

In the SME context, managers implement new knowledge structures based on personal concerns that are expressed by employees or other stakeholders (i.e., groups affected by the organisation's values and practices) or because of their personal preferences (Carlson *et al*., 2006). This suggests that, in SMEs, managerial support for RACAP is an important factor to be considered since managers are the key decision makers who have the last word in deciding which knowledge structures will be used (Zahra & Hayton, 2008). If the founder's knowledge is incorporated into the knowledge structures (e.g. exploitation and transformation) then managers can share appropriate assumptions about appropriate routines or appropriate approaches to scanning the wider business environment and to defining, meeting and bringing forward their ideas by introducing new products (Gibb, 1997). In other words, the founder's knowledge can influence RACAP because managers implement knowledge structures using concerns expressed by employees or customers (Tilley, 1999) or through observing the benefits achieved by other companies through their knowledge structures or because of their personal preferences. Under this framework, the effectiveness of knowledge structures depends upon the managers' ability and willingness to combine their own knowledge with new knowledge updated and acquired by other managers and employees of the firm (e.g., Darr *et al*., 1995; Wyer *et al*., 2000; Bosma *et al*., 2004).

2.2 Congenital learning

Founders have been credited as providers of critical knowledge upon organizational start-up (Laanti *et al*., 2007) and as the instigators and shapers of organizational strategy (Reuber & Fischer, 1999). The founder of an organization can bring to the organization a stock of specific knowledge that can help to open windows of opportunities on a global scale that others overlook (Madsen & Servais, 1997). As Chetty and Campbell-Hunt (2004) indicate, the personal knowledge of the founder and managers is an important predictor of international activities not just in that it operates in reducing perceived uncertainty but also in that it allows companies to perceive and formulate opportunities abroad. This knowledge would be expected to result in more appropriate actions being taken and superior decision making leading to improved company performance (Olson *et al*., 2003; Zhang & Rajagopalan, 2004; Huson *et al*., 2004). Huber (1991) refers to this founder's knowledge as "congenital knowledge".

Most studies in the entrepreneurship literature recognize that the survival of SMEs is driven by the founder's initial knowledge (Agarwal *et al*., 2004) but the mechanisms by which an organization can realize benefits from the founder's knowledge are unclear. The congenital learning process is useful in this respect since it represents the mechanism by which the organization transforms the tacit and explicit knowledge of the founder into updated and valuable knowledge (Sapienza *et al*., 2006; Bruneel *et al*., 2010). This process involves a series of phases in which a founder transfers (describes) a salient event and then reinforces or transforms his/her positive and negative feelings about the event. Ultimately, the organization re-examines its new strategies in an effort to understand and to plan how it would act in a similar situation in the future (Cegarra & Wensley, 2009). In this regard, Burke *et al*. (2006), based on their reading of Kofodimos (1995) and Burke (2004), describe that, when workers negotiate the use of new knowledge structures with their managers as a group, the positive attitude of managers towards new knowledge structures becomes vital in providing support and encouragement for a new knowledge activity.

The capabilities gained by the founder's personal experience, relations and knowledge may give internationalization strategies advantages that increase the probability of success (Bruneel *et al*., 2010) but the causal logic of this relationship has not been fully articulated

(Sapienza *et al*., 2006). Indeed, by increasingly exploiting prior experience, relations and knowledge, if they are not careful, founders can fall into a "competence trap" (Leonard-Barton, 1992; Levinthal & March, 1993). Furthermore, Macinnes (2005) suggests that one of the factors preventing new knowledge structures is managers' negative attitude towards them owing to perceived ambiguous results (e.g., the perceived cost of implementing some initiatives and doubts with respect to the subsequent benefits). It should be also noted that inertia (i.e., the utilization of outdated knowledge) potentially leads to degradation in some managerial functions (e.g., commanding, organising, coordinating, and controlling) and, hence, potentially serious negative outcomes (Hannan *et al*., 1996). This means that prior experience may become outdated or less relevant over time (Akgün *et al*., 2007) and, for the small firms, the top management team may bring their prior old-fashioned international experience and foreign market knowledge (Ensley *et al*., 2002).

These ideas illustrate that, in order to strengthen the RACAP and thus positively influence international organizational performance, an SME must be flexible when configuring (combining) congenital knowledge in a manner that is appropriate for delivering value to the company and be effective in updating the actual knowledge of its staff. In this study, we have considered that the congenital knowledge provided to organizations by founders is also augmented as a result of their participation in the "international relationships" that are developed between the founders and management and employees (Bruneel *et al*., 2010). In doing so, we suggest that the process of learning from the organizational founder (i.e., "congenital learning") can be considered to be a prior step to develop more comprehensive models of the new knowledge structures (Bruneel *et al*., 2010).

Cegarra and Wensley (2009) suggest that the congenital learning process should be operationalized using three sub-dimensions: **a**) the transfer of knowledge which comprises the transmission of knowledge from founders to the individuals that interact with them and includes the nature of those interactions (e.g., formal and informal meetings); **b**) the transformation of knowledge which is the ability to retain the transferred knowledge within the organization throughout the passage of time which requires the transformation of an individual's knowledge into social knowledge to enable other members of the organization to use this new knowledge in their own work; and **c**) an open organizational context, which is associated with the concept of open-mindedness, through which management supports the proactive questioning of existing organizational routines, assumptions and beliefs, potentially leading to them to being ignored, modified, deleted or replaced (Sinkula et al., 1997).

2.3 Relationships between congenital learning and RACAP

The question to consider now is whether congenital learning has a direct effect on RACAP. In particular, does the pursuit of transferring, transforming and updating processes and the interactions between them add to RACAP? In this regard, companies that have developed a strong culture (e.g., a strong learning culture) may also be good at transferring, transforming and updating knowledge, as well as modifying behaviour to reflect new knowledge and insight (Huber, 1991; Garvin, 1993). From this perspective, organizations placing emphasis on new knowledge structures must first acquire information, interpret it to fully understand its meaning and transform it into knowledge. In addition, RACAP involves both individual and organizational change so it is appropriate to question how the change process may be modelled. Furthermore, it is important to note that congenital learning may also stimulate the process of applying knowledge which leads to improvements in RACAP (Sánchez-Vidal *et al*., 2011).

The above considerations lead us to argue that achieving RACAP requires the co-operation and involvement of the whole organization in making congenital learning the initial step towards new knowledge structures. It is important to note that while congenital learning is a management tool deployed in order to achieve management goals, it is not only managers that need to be thinking about how to make it happen or how to function differently. All members of the organization need to consider what their responsibilities and roles are in such a culture. From an organizational perspective, in order to learn something new, organizational members need to reach some kind of consensus. At the same time, learning, through better knowledge and understanding, facilitates behaviour changes that lead to cognitive changes – in order to convert words into effective new knowledge structures (Simon, 1969; Fiol & Lyles, 1985; Senge, 1990; Garvin, 1993; Lei *et al*., 1999).

New knowledge structures are an aspect that becomes important, particularly in SMEs, where the adoption and use of new practices by the employees depends more on the existence of positive values towards them than on the availability of formalized practices (De Kok & Uhlaner, 2001; Dex & Scheibl, 2001;). Along with other authors (e.g. Van den Bent *et al*., 1999; Carlson *et al*., 2006), we argue that for a given organization, 'knowledge', both external and internal to the organization, needs to be critically examined since it may be relevant. As indicated above, to get an updated view of a new knowledge structure and to understand its effects, managers have to examine the phenomenon from a number of different angles. If managers come to rely uncritically on internal knowledge, they are likely to become less creative (Sinkula *et al*., 1997).

Founders have accumulated knowledge, experiences and skills over time, which implies that they differ in terms of their ability to overcome both perceived and actual barriers to internationalization. Such abilities can be characterized as systematic in that they recognize an opportunity in which assimilated knowledge can be exploited and then deploy it (Short *et al*., 2009). Consequently, congenital knowledge endows founders with a greater ability to facilitate the acquisition of external knowledge on market development, technological change and production processes (Shane, 2003; Musso & Francioni, 2014). This, in turn, will increase the ability to refine the organization's existing knowledge structures (e.g., transformation and exploitation). Hence, the knowledge created and updated by founders through the congenital learning process may prove crucial for recognizing the value of new knowledge, assimilating it and applying it to create new capabilities. However, the benefit derives not only from the founders' initial knowledge about their own firms (Agarwal *et al*., 2004), but also from knowledge about markets and, perhaps more importantly, knowledge of how to serve these markets (Sainio *et al*., 2011). Thus, the hypothesis we propose under this framework is:

H1: The congenital learning process is positively associated with the RACAP

Knowledge of and information concerning international markets and operations are important to reach international performance levels in small firms (Autio *et al*., 2000). In prior research explaining international activities, Johanson and Vahlne (1977, 1990, 2006) suggest that a firm needs to increase its know-how about foreign markets before going and then expanding abroad. In this respect, the resource-based view of the firm implies that as the degree of knowledge increases, the firm's chances of success increases because the firm is able to deploy key resources essential to success (Isobe *et al*., 2000). These resources could be intangible properties such as brand equity and marketing (Luo & Peng, 1999). In doing so,

RACAP is not only a way of transferring new knowledge but also a way in which SMEs are able to exploit new knowledge (Zahra & George, 2002). In this vein, authors such as Gray (2006) and García-Morales *et al*. (2008) suggest that RACAP injects new ideas into the organization, increases the capacity to understand new ideas and strengthens creativity and the ability to identify new opportunities. In addition, RACAP facilitates the development of a firm's innovation capacity through the application of knowledge acquired from both internal and external sources (Chesbrough, 2003). However, international activities (e.g., entering different countries, approaching new markets) depend on the amount of knowledge that has been accumulated and learned when the company implements change through RACAP (Johanson & Vahlne, 2006). Thus, RACAP can be identified as a key process in the internationalization of an organization, enhancing the company's ability to improve international performance (Lloréns-Montes *et al*., 2005; Johanson & Vahlne, 2006). Consequently, we propose the following hypothesis:

H2: The existence of an appropriate level of RACAP will determine the extent to which the company achieves better international organization performance

Figure 1 shows the sequential model which illustrates the proposed hypotheses.

Insert Figure 1 about here

3. Method

3.1 Data collection

The UK Telecommunications industry was used to investigate these hypotheses. The UK's telecommunications industry represents 4.1% of UK GDP and the turnover in the industry grew by 6% (to £50.8bn) in 2003, employing around 164,000 people in the UK both directly and indirectly (MBD, 2007). The UK Telecommunications sector was chosen because: a) firms in this sector are well known for their high-technology capabilities and capacities, with many of them having an existential dependency on technology; b) this sector in the UK has been the recipient of special attention in the last few years in terms of support for ICT implementation; and c) government policies in the UK and elsewhere have actively focused on promoting the internationalization of this industry. In addition, gathering data from a specific sector eliminates the contextual factors and business operational characteristics that may affect the ICT-productivity relationship (Sigala, 2003). Therefore, the UK telecommunications industry is an appropriate setting for an investigation of congenital learning and its impact on RACAP.

Owing to the absence of a census of SME'S that comprise the UK telecommunications industries, a preliminary study was undertaken to identify those companies that could be the target of our data collection. We used of a list of 709 SMEs provided by the FAME database (Financial Analysis Made Easy Database) as an initial sampling frame (based on the statistical year 2007). All the companies we included were in the telecommunication sector and were classified as SMEs according to the European Union classification. According to the European Commission (2003), an SME comprises fewer than 250 employees, with an annual turnover not exceeding €50 million euros, and an annual balance sheet total not exceeding €43 million euros. This data was collected by sending letters and e-mails accompanied by a questionnaire to the general manager or director of each of the companies.

Surveying took place over a period of a month, from early July to August 2007. The 709 companies were contacted and respondents were asked to indicate whether the founders were still actively involved with the company. Before conducting the surveys, the businesses were contacted and asked by our team to participate in the study. They were informed by telephone of the objectives of the research and they were assured of its strictly scientific and confidential character, as well as the global and anonymous treatment of the data. Only those companies where the founders were still actively involved were asked to complete the survey. From a sample of 709 companies, the total number of participants was 128 companies. This resulted in a response rate of 18.05% with a factor of error of 7.84% for p=q=50% and a reliability level of 95.5%. This is consistent with the 10 to 25 percent range suggested as the average response rate for surveys involving senior management (Menon *et al*., 1996). A comparison between companies who had answered and companies who had not answered yielded no significant differences relevant to turnover, total assets and number of employees, which suggested that non-response bias was not a problem (Armstrong & Overton, 1977).

Given that we relied on a single respondent design, it was necessary to control for common method bias in two ways: through the design of the study and through statistical control (Podsakoff *et al*., 2003). Regarding the survey design, the research project was introduced as a broad overview of succession and management practices adoption. Therefore, no explicit reference to the intention to test antecedents of international organizational performance was evident. Thus, the respondents' attention was not drawn to the relationships being targeted in

this study. Questions, including the items and constructs related to each other in the general model, were also separated in the questionnaire in order to prevent respondents from developing their own theories about possible cause and effect relationships. Furthermore, the questionnaire was carefully created and pre-tested and respondents were assured of strict confidentiality. As the second means to ensure against common method bias, we examined the unrotated factor solution (Podsakoff & Organ, 1986). We were able to determine five factors that account within a range of 6 to 28 percent for the variance in the measures. Consequently, neither a single nor a general factor is likely to account for the majority of the covariance among the measures.

3.2 Measures

Churchill's (1979) approach to questionnaire development was used. Scales were combined from several other relevant empirical studies with new items to make an initial list of 20 items (9 measuring the range of congenital learning, 8 measuring the range of the RACAP and 3 relating to international organization performance). All items were measured using a 7-point Likert scale. The questionnaire constructs comprised:

Congenital learning (CL) was formed from the three dimensions: transfer of knowledge; transformation of knowledge; and open organisational context. Consistent with Cegarra and Wensley (2009), nine items that addressed the congenital learning process were interwoven with issues related to encouraging founders in the organisation to track changing markets and share market intelligence with employees and managers.

RACAP was measured using the dimensions that have been defined by Jansen *et al*. (2005). Four items measured transformation and assessed the extent to which firms were able to facilitate recognition of the opportunities and consequences of new external knowledge for existing operations, structures, and strategies (Zahra & George, 2002). In addition, four items addressed the extent to which firms were able to exploit new external knowledge. The scale gauged the ability of companies to incorporate new external knowledge into their operations.

International organizational performance (IOP) was measured using the three measures of perceptions of organisational performance used by Delanie and Huselid (1996) in which managers are asked to evaluate different aspects of their business results in the last three years compared to competitors.

3.3 Assessment of the measures

In order to obtain a more robust evaluation of the quality of the resulting 20 items, a confirmatory factor analysis was carried out using the covariance matrix as input via the EQS 6.1 robust maximum likelihood method. An examination of the results shown in Table 1 suggests that all of the constructs are reliable. For all the measures, Bagozzi and Yi's (1988) composite reliability index and Fornell and Larker's (1981) average variance extracted index are higher than the evaluation criteria of 0.7 for composite reliability and 0.5 for the average variance extracted.

Insert Table 1 about here

Discriminant validity was determined by comparing the square root of the average variance extracted (i.e., the diagonals in Table 2) with the correlations among constructs (i.e., the

lower triangle of the matrix in Table 2). On average, each construct related more strongly to its own measures than to others (Fornell & Larcker, 1981). The constructs' correlation matrix, shared variances, means and standard deviations are shown in Table 2.

Insert Table 2 about here

Congenital learning (CL) was operationalized as a second-order construct with three dimensions. The decision to operationalize CL as a reflective construct was based on the understanding that the transfer of knowledge (TR), the transformation of knowledge (TT) and the open organizational context (OOC) are processes that occur simultaneously. In effect, the three variables are neither independent nor autonomous but they are interacting permanently. Therefore, a second-order confirmatory factor analysis of a model depicting the TR, TT and OOC was conducted. An examination of the results shown in Table 3 suggested this model yielded acceptable fit indices (Satorra-Bentler $\chi^2_{(23)}$*= 28.422;* χ^2*/d.f= 1.235; GFI=.949; CFI=.989; IFI=.989; RMSEA= .043*). In addition, all first-order and second-order factor loadings were significant, thereby providing evidence that CL is a multifaceted construct, constructed from TR, TT and the OOC. Hence, the second-order factor model demonstrated a composite CL in this study.

Insert Table 3 about here

Transformation and exploitation capabilities can also occur simultaneously. Consequently, RACAP was operationalized as a second-order construct with two reflective dimensions. A second-order confirmatory factor analysis of a model depicting the transformation of knowledge and the exploitation of knowledge was conducted. An examination of the results shown in Table 4 suggested that this model also yielded acceptable fit indices (Satorra-Bentler $\chi^2_{(17)}$*= 26.354;* χ^2*/d.f=1.55; GFI=.906; CFI=.968; IFI=.969; RMSEA= .066*). Therefore, all first-order and second-order factor loadings were significant, thereby providing evidence that RACAP is a multifaceted construct, constructed from the transformation of knowledge and the exploitation of knowledge. Hence, the second-order factor model demonstrated a composite RACAP in this study.

Insert Table 4 about here
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4. Results

Once the psychometric properties of the measures had been checked, the next step was the evaluation of the hypothesized relationships developed from consideration of relevant literature (see Figure 2) and described earlier as H1 and H2. Figure 2 summarizes the structural models resulting from the EQS analysis and shows the explained variance of endogenous variables (R2) and the standardized path coefficients. The fit of the model is satisfactory (Satorra-Bentler $\chi^2_{(161)}$*=229.165;* χ^2*/d.f=1.423; GFI=.914; CFI=.932; IFI=.934; RMSEA= 0.058*), thereby suggesting that the nomological network of relationships fitted the data which is another indicator of support for the validity of these scales (Churchill, 1979).

The structural model was also evaluated by examining the R2 values and the size of the structural path coefficients. While the proportion variance explained in 'RACAP' was 37.8 per cent, the variance explained in 'international organizational performance' was 35.6 per cent. Figure 2 also summarizes structural competing links, which indicate that a positive relationship exists between congenital learning and RACAP (γ_{11} = 0.61; $p < 0.01$). Figure 2

shows that RACAP influence on international organization performance receives full verification, (β_{21} = 0.59; $p < 0.01$). Together, these results provided full support for H1: (*CL → RACAP*), and also for H2: (*RACAP → IOP*).

Insert Figure 2 about here

5. Discussion

The aim of this paper is to explore congenital learning as an important driver of internationalization and how the required realized absorptive capacity (RACAP) is created to better match some specific needs of foreign customers. In this regard, the extent of founder's knowledge loss has implications for developing human resource policies concerning personnel retention in general (Agarwal *et al*., 2004), and for forecasting production quality, costs and rates (Haveman & Khaire, 2004; Freeman *et al*., 2006; Freeman & Cavusgil, 2007). The findings from this study make an important contribution to the ongoing debate surrounding the relationship between founder's knowledge and knowledge structures. Furthermore, they support the claims of earlier studies that the internationalization of small organizations is positively influenced by new knowledge structures. This study suggests that congenital knowledge is transferred from the founders to the mangers through a congenital learning process and it is through such a process that managers of a small organization are able to improve the knowledge structures of their companies by introducing new knowledge structures resulting in increased internationalization.

In addition, our findings suggest that this congenital learning process is customised and based on three sub-processes: 1) the framework for transferring knowledge; 2) the framework for transforming knowledge; and 3), an open organizational context. Based on these results, transferring and transforming are important sub-processes but are not sufficient for updating congenital knowledge. One possible explanation for these correlations among the three variables (see Table 2) may be related to the need for the founder's knowledge to be updated with the knowledge of the firm's managers and employees through the processes that support an open organizational context. Thus, transferring knowledge, transforming knowledge and an open organizational context are processes that occur simultaneously. We think this is an important contribution as perhaps founders are over-investing in the development of transferring and transforming processes when they should be investing in mechanisms to facilitate an open organizational context.

This research's second contribution is to question the existing models which relate to RACAP and congenital learning. Our findings show that in order to support a positive attitude toward RACAP, managers need to provide and support congenital learning. This finding confirms the view of authors such as Bruneel *et al*. (2010) when they argue that the founder's previous international experience and competences during previous work must somehow be transferred to individuals within the organization or embedded in the organization. RACAP supposes the transformation and exploitation of updated congenital knowledge which, in turn, fosters learning and the recognition and development of new knowledge relating to international markets by members of the organization. SMEs endowed with higher levels of RACAP will be able to extract greater benefits from the founder's knowledge (e.g., direct international experience and competences acquired through previous work) and, therefore, outperform rivals in their innovation activity. One possible explanation for this would be that congenital learning provides the incentives (e.g., initiatives for marketing, sales, production or sourcing purposes) from which congenital knowledge can be recognized and developed. At the same time, knowledge structures (transformation and

exploitation) delineate potential pathways through which international markets interface with the company's incentives to affect competitiveness by creating products or services that satisfy needs in international markets.

This research's third contribution is provided by the results of empirically testing the proposed hypotheses. The managerial implications of the relationships observed between the factors that constitute the conceptual framework shown in Figure 2 are discussed in more detail below.

With respect to the test of hypothesis H1, the results support the position that, in order to achieve higher levels of RACAP and foster the adoption of new knowledge structures, SMEs need to provide and support a congenital learning process. One interpretation of this relationship is that through the congenital learning process, a company can allow individuals to adjust their mental models and the nature of the assumptions shared to fundamentally change the current workplace culture. Following the analysis developed in this paper, it is necessary to implement RACAP in order to be able to exploit the founder's knowledge, especially for those companies which have retained skills and knowledge for long periods of time. As Chirico (2008) has noted, an incomplete or inappropriate knowledge creation network is likely to lead to difficulties and misalignments in the operational environment of family companies, mostly owing to the unusual nature of the decision-making processes in these firms, which are generally not formalised and are also very centralised (Chirico & Salvato, 2008). From our framework, we suggest that any SME wishing to achieve the required RACAP should initially make efforts to update the relevant knowledge of its workforce, including founders or owners. This is vital to the processes that are needed to better match some specific needs of its international customers (Tsai, 2001).

With regard to H2, the results support the position that international organizational performance is likely to suffer if an SME does not have the required RACAP. The baseline assumption in this paper is that RACAP is a multidimensional construct. In the process by which founder knowledge transforms into innovation outcomes, the role played by a RACAP changes continuously and RACAP impinges at different times on different capabilities and routines. Specifically, we have focused our attention on the ability to transform and exploit congenital knowledge, which has been created in the organization by creating a process where people consciously use new skills and knowledge. The results support the position that the international opportunities achieved by a specific firm at a particular point in time depend on the RACAP process. A possible explanation of the results may relate to the advantages of the knowledge processes that RACAP highlights as a result of their different capabilities. On the one hand, the transformation capability renders knowledge easier to understand and communicate. On the other hand, the exploitation capability makes knowledge safer from becoming lost as a result of the initial application of knowledge that facilitates foreign market entry and operations. This confirms the position adopted by Zollo and Winter (2002) when they emphasise that the RACAP process becomes a crucial source of competitive advantage. In other words, for an SME to grow and prosper in an international context, such as the UK telecommunications industry during the period we have examined, it is necessary for management to foster the required RACAP.

This study provides managers with a better understanding of congenital knowledge and highlights that it needs to be more explicitly recognized and managed in small organizations so that part of it can be updated and used later. This is an important contribution as managers in SMEs often multi-task and lack the time, training or inclination to examine the

opportunities that a formal learning process can provide (Martin & Chapman, 2006), SMEs often do not have the resources (e.g., financial, human, equipment) to facilitate formal learning processes. As a result, the learning process within SMEs is often more informal than in larger organizations. Congenital learning is used here to refer to the formal process of the firm to gain confidence on the use of relationship among informational factors to transfer, transform and update the congenital knowledge of the founder and managers. It is with this in mind that we propose that an explanation for the numerous failures in the internationalization planning of SMEs described earlier may relate to the fact that the majority of SMEs have used the founder's knowledge without absorbing the nature and extent of this knowledge.

The study has some limitations. Firstly, the research is based on self-generated reports which can bias findings. In addition, the transverse nature of this research impedes analysis of the effect of time on organizational results, the congenital learning process and level of implementation of RACAP practices. We would further observe that the sample is relatively small for conducting confirmatory factor analysis and for final structural modelling. Therefore, it would also be interesting to extend the survey to other companies. Finally, this research was performed in a specific country and sector of activity which might prevent the generalisation of the results to other sectors or countries.

The limitations of this research could be addressed in future studies. For example, one line of research could be to examine employees' views on the congenital learning process in order to obtain the workforce viewpoint. Another line of research could be to develop a longitudinal study that examines the changes in the variables of the study over time. Additionally, we encourage other researchers to conduct research in other sectors of activity and types of companies, especially large organizations and examine the effect of the existence of a congenital learning process on the implementation of other organisational policies or practices. Finally, we suggest that future researchers might profitably investigate the factors that dissuade managers from adopting a congenital learning process in their companies in order to develop recommendations for improvements in the future.

6. Conclusion

This paper analyses the relationships between congenital learning and RACAP and tries to identify whether RACAP impacts on international organizational performance through an empirical study of 128 SMEs in the UK Telecommunication sector. Our findings show that in order to create positive attitudes toward internationalization, managers need to create and support the RACAP process. This means that the presence of internal capabilities that foster the transformation and exploitation of congenital knowledge is likely to be essential for SMEs that are trying to achieve improved international organizational performance.

The findings also provide interesting insights into the drivers of internationalization for SMEs that develop and support learning processes. Based on our results, transferring knowledge, transforming knowledge and the open organizational context are processes that occur simultaneously and interact with each other. In this way, the congenital learning process can encourage founders to question not only the information they own but also whether their particular approach to adopting a new knowledge structure is applicable or not (Sinkula *et al*., 1997). Such questioning may also lead to new interpretations of existing knowledge or the elimination of what was formerly considered to be knowledge or accepted wisdom.

This paper provides a starting point to bring together managers and employees in the achievement of the required congenital knowledge from which appropriately diverse knowledge capacities can be implemented. We think that this is an important finding, as the potential for any small enterprise to develop will depend substantially on its ability to maintain a balance between the founder's previous international experience and updated capacities. Thus, if managers fail to update their own congenital knowledge they may be trapped in a stable but suboptimal equilibrium. As many founders and owners may themselves have failed to develop or appreciate the required knowledge at any moment, they may not be actively listening to their employees. Hence, they may be over-investing in the development of some knowledge structures while preserving and following old beliefs and traditions.

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Table: 1. Factor loadings of the resulting items and scale reliability

Construct	Standardised loading	t-value	Reliability (SCR[a]., AVE[b])
Transfer of Knowledge			
TR_1: Small groups meet with founders at least one a year to listen to their views	.651	7.418	AVE=0.587
TR_2: Management meet with founders at least one a year to review the likely effects of changes in the business environment (e.g. legislation)	.681	7.818	SCR=0.809
TR_3: Activities (e.g. dinners, lunches, team building-days) are organised for founders, managers and other employees.	.835	9.949	
Transformation of Knowledge			
TT_1: Managers interact directly with employees to learn how best to serve founders	.916	13.007	AVE=0.792
TT_2: Founders initiate projects and introduce innovations	.924	13.190	SCR=0.919
TT_3: Founders collaborate with employees and solve problems with them	.722	9.194	
Open organisational context			
OOC_1: Management initiates projects and introduces innovations	.865	11.603	AVE=0.73
OOC_2: Managers recognise the value of new information, assimilate it and apply it	.874	11.770	SCR=0.89
OOC_3: Management accepts change and actively introduces it the business	.726	9.068	
Transformation capacity			
RACAP1: Our unit regularly considers the consequences of changing market demands in terms of new products and services	.784	9.633	AVE=0.502
RACAP2: Employees record and store newly acquired knowledge for future reference	.727	8.971	SCR=0.840
RACAP3: Our unit quickly recognises the usefulness of new external knowledge to existing knowledge	.832	10.842	
RACAP4: Our unit periodically meets to discuss consequences of market trends an new product development	.613	7.188	
Exploitation capacity			
RACAP5: Its clearly known how activities within our unit should be performed	.760	9.239	AVE=0.519
RACAP6: Our unit has a clear division of roles and responsibilities	.560	6.305	SCR=0.834
RACAP7: We constantly consider how to better exploit knowledge	.775	9.486	
RACAP8: Employees have a common language regarding our products and services	.568	6.412	
International Performance			
OP1: Firm's capacity to generate new products and services for foreign markets	.695	8.122	AVE=0.567
OP2: Ability to retain foreign customers	.798	9.649	SCR=0.796
OP3: Satisfaction of foreign customers	.672	7.795	

Notes:
The fit statistics for the measurement model were:
Satorra-Bentler $\chi^2_{(150)}$= 181.27; χ^2/d.f= 1.20; CFI=0.960; IFI=0.961; RMSEA= 0.057.
[a] Scale Composite Reliability (SCR) of $p_c= (\Sigma\lambda_i)^2$ var (ξ) / $[(\Sigma\lambda_i)^2$ var $(\xi) +\Sigma\ \theta_{ii}]$ (Bagozzi & Yi, 1998).
[b] Average variance extracted (AVE) of $p_c= (\sum\lambda i2$ var $(\xi))/[\sum\lambda i^2$ var $(\xi) + \sum\theta ii]$ (Fornell & Larcker, 1981).
The asymptotic covariance matrices were generated to obtain the scaled chi-square (Satorra & Bentler, 1988) and robust estimation of standard errors.

Table 2 Construct correlation matrix

			Correlation matrix							
	Mean	**S.D**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Transfer of Knowledge	5.031	1.189	***.766***							
2. Transformation of Knowledge	5.385	1.176	.453 [a]	***.889***						
3. Open Organizational Context	5.497	1.256	.406 [a]	.505 [a]	***.854***					
4. Transformation Capacity	4.600	1.179	.221 [b]	.326 [a]	.302 [a]	***.708***				
5. Exploitation Capacity	4.227	1.129	.117	.298 [a]	.203 [a]	.607 [a]	***.720***			
6. International Performance	4.427	1.303	.436 [a]	.458 [a]	.530 [a]	.352 [a]	.363 [a]	***.752***		
7. Congenital learning	5.305	.963	n.a	n.a	n.a	.355 [a]	.257 [a]	.596 [a]	***n.a***	
8. Realized absorptive capacity	4.413	1.034	.19 [b]	.348 [a]	.283 [a]	n.a	n.a	.399 [a]	.343 [a]	***n.a***

Notes:

[a] <0.01; [b] <0.05; n.a. = not applicable;

N= 164. Mean = the average score for all of the items included in this measure; S.D. = Standard Deviation; Intercorrelations are presented in the lower and shady triangle of the matrix. The bold numbers on the diagonal are the square root of the Average Variance Extracted.

Table 3 Second-order confirmatory factor analysis of the Congenital Leaning

First-order construct		First-order		Second-order	
	Indicator	Loading	*t*-value	Loading	*t*-value
Transfer of Knowledge (TR)	TR_1	0.645	-[a]		
	TR_2	0.670	6.025	0.665	5.40
	TR_3	0.849	6.440		
Transformation of Knowledge (TT)	TT_1	0.916	-[a]		
	TT_2	0.925	14.857	0.840	7.01
	TT_3	0.719	9.960		
Open organizational context (OOC)	OOC_1	0.874	-a		
	OOC_2	0.863	10.926	0.659	4.63
	OOC_3	0.729	9.121		

Notes:
Fit statistics for measurement model of 9 indicators for three constructs:
Satorra-Bentler $\chi^2_{(23)}$= 28.422; χ^2/d.f= 1.235; GFI=.949; CFI=.989; IFI=.989; RMSEA= .043.
[a] Fixed parameter.

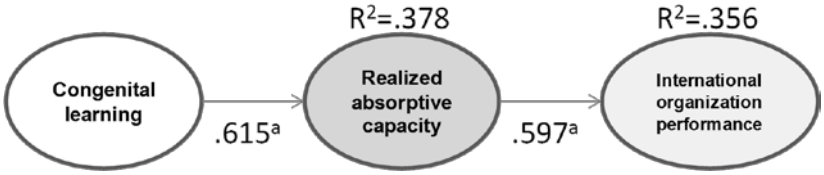
Table 4 Second-order confirmatory factor analysis of the realized absorptive capacity

First-order construct		First-order		Second-order	
	Indicator	Loading	*t*-value	Loading	*t*-value
Transformation Capacity	$RACAP_1$	.785	[a]		
	$RACAP_2$	.724	8.099	.908	4.735
	$RACAP_3$	.828	9.232		
	$RACAP_4$	.621	6.842		
Exploitation Capacity	$RACAP_5$	.755	[a]		
	$RACAP_6$	.560	5.761	.848	4.800
	$RACAP_7$	.784	7.787		
	$RACAP_8$	.561	5.770		

Notes:
Fit statistics for measurement model of 9 indicators for three constructs:
Satorra-Bentler $\chi^2_{(17)}$= 26.354; χ^2/d.f=1.55; GFI=.906; CFI=.968; IFI=.969; RMSEA= .066.
[a] Fixed parameter.

Figure 1: Theoretical model

Figure 2: Model Statistics



Notes:
[a] <0.01;
The fit statistics for the measurement model were: Satorra-Bentler $\chi^2_{(161)}$=229.165; χ^2/d.f=1.423; GFI=.914; CFI=.932; IFI=.934; RMSEA= 0.058