Paper to be presented at the

35th DRUID Celebration Conference 2013, Barcelona, Spain, June 17-19

Using Dynamic Capabilities to Transform a Firm´s Resource Base: Bridging Path Creation and Path Dependency

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Abstract

Dynamic capabilities are increasingly being used to explain how firms leverage their resource base, over varying levels of market dynamism, yet numerous questions remain. One dilemma surrounds how firms might engage in routinized, path dependent activities while simultaneously exploring new opportunities. Another issue surrounds the strategic role required of key firm decision makers in bringing about differential performance. Using an in-depth case study (2007 to 2012) on the airline Spanair, we ask the following question: How can a firm leverage its resource base to bring about deep purposeful change? In our findings we identify a hierarchical framework with two first order dynamic capabilities, goal directing and renewing, and one second order capability, transforming. We contribute to the literature by demonstrating, how a link between the goal directing capability of senior directors and the transforming capability, create a strategic goal directed path. We also explain how the link between the goal directing and renewing capabilities develops an important bridge between path dependency and path creation in dynamic capabilities. With our renewing dynamic capability (adding, integrating, transferring, and shedding of resources) we show how the systematic use of internal as well as external resources can bring about deep change.

Jelcodes:M10,-

USING DYNAMIC CAPABILITIES TO TRANSFORM A FIRM'S RESOURCE BASE: BRIDGING PATH CREATION AND PATH DEPENDENCY

INTRODUCTION

In order to achieve differential performance, key firm decision makers need to understand how to leverage their resource base, to bring about not only incremental change, but also more significant change (Rumelt, Schendel and Teece, 1991). The issue of dynamic capabilities was initially associated with developing a resource base that could be used to respond to rapidly changing external environments (Teece, Pisano and Shuen 1997). However, the term has since been suggested to be present in all environments, as routines that change, with the extent of market dynamism (Eisenhardt and Martin, 2000; Winter, 2003). Yet, if we are to follow the routine based, path dependent approach (Winter, 2003) too closely, a dilemma arises. In such situations, routinized actions can bias a firm towards localized exploitation (Levinthal and March, 1993) that may well suffice when incremental change is needed, but can constrain searches for more distal alternatives, when seeking to bring about deeper levels of change (Gavetti, Greve, Levinthal and Ocasio, 2012).

While the routine, path dependent approach is undeniably important in explaining dynamic capabilities, it also brings with it the challenge of explaining how these capabilities relate to firm performance, as advocated by Teece et al. (1997). Sirmon, Hitt, Ireland and Gilbert (2011) and Helfat and Peteraf (2009) go some way to open this issue, where they refer to the orchestration required by firms to purposefully adapt their resource base, in order to create value, moving attention toward the important role of key decision makers in guiding this action. Others, such as Ambrosini, Bowman and Collier (2009) in their conceptual account draw attention to the important role that top management play in guiding dynamic capability development. Zahra, Sapienza and Davidsson (2006) take a more strategic approach to suggest dynamic capabilities should be strategically focused if they are to achieve a firm's goals. Despite these studies, there does not appear to be any empirical investigation that takes an in-depth case study approach to examine how the dynamic capabilities of key decision makers might be used to guide and monitor performance related goals to bring about significant change.

This leads to our research question: How can a firm leverage its resource base to bring about deep purposeful change? We examine this question using an in-depth case study (2007 to 2012) on the airline Spanair S.A., Spain's second largest airline and a member of the Star Alliance Group. In particular, we focus on the changes introduced between 2009 and 2010 to Spanair. This period began, what was considered by the ICAO (International Civil Aviation Organization), as the most challenging and turbulent period in the history of the air transport industry (Benjamin, 2009), where Spanair faced major external and internal turmoil. We analyse the processes this airline went through as it significantly changed its resource base.

This paper contributes to the literature in the following ways. We develop a hierarchical framework with two first order dynamic capabilities, goal directing and renewing, and one second order capability, transforming. We demonstrate how the link between the goal directing capability and the transforming capability create a strategic goal directed path that senior directors use to guide and monitor performance. We also show how the link between the goal directing and renewing capabilities creates an important bridge between path creation and path dependency in dynamic capabilities. The renewing dynamic capability (adding, integrating, transferring, and shedding of resources) demonstrates how this firm systematically uses its internal as well as external resources to bring about deep change. Furthermore, we show how the goal directing and renewing capabilities are jointly required to enable transformative growth particularly, in times of heightened internal and external environmental turbulence.

In the following section we review the dynamic capability literature. We identify that a deeper empirical understanding is required on how a firm might leverage its abilities to bring about significant change to its resource base. The methods section explains our rationale for using case study methodology. This is followed by the findings section that grounds our theoretical concepts to empirical events found in this case study. We then discuss these findings in relation to the literature on dynamic capabilities.

THEORETICAL BACKGROUND: DYNAMIC CAPABILITIES – NATURE, HIERARCHIES AND AGENTS OF CHANGE

Dynamic capabilities have been introduced to explain how some firms compete more successfully than others in rapidly changing environments (Teece et al., 1997). The term has been used to support the RBV, to demonstrate how an essentially static view of a firm's resources, can be used to compete in a dynamic context (Barney, 2001a; 2001b). Yet, debates continue on the nature of dynamic capabilities, as well as the effects and consequences of the term (Easterby-Smith, Lyles and Peteraf, 2009). Teece, Pisano and Shuen (1997) broadly define dynamic capabilities as the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (1997, p.516); thereby leaving open issues such as how can dynamic capabilities be recognized. Various authors have alined their responses with their research backgrounds. For example, (Winter, 2003) defines dynamic capabilities as routines, while Eisenhardt and Martin (2000) define them as processes that change in response to the extent of market dynamism (Eisenhardt and Sull, 2001; Eisenhardt, 1989) in all levels of market dynamism. In terms of the effects of dynamic capabilities Teece (Teece et al., 1997; Teece, 2007) argues for a link between dynamic capabilities and competitive advantage. In contrast, Eisenhardt and Martin (2000) suggest dynamic capabilities cannot be a source of competitive advantage as they demonstrate best practice and exhibit equifinality (Easterby-Smith, Lyles and Peteraf, 2009). Helfat and Peteraf, (2009, p.94) have since defined dynamic capabilities as "the capacity of an organization to purposefully create, extend or modify its resource base". While accommodating both Teece et al., (1997) and Eisenhardt and Martin (2000), this definition leaves open the opportunity to better understand the dynamic capabilities – competitive advantage relationship by, for example, using analytical tools developed from other theoretical bases. Augier and Teece's (2009, p.413) suggest a link where, "dynamic capabilities can perhaps be viewed as the 'new' and extended behavioural theory of the firm".
Dynamic capabilities, which have been variously described, are organizational processes in the most general sense (Helfat et al., 2009), or organizational routines (Zollo and Winter, 2002) embedded in the firm that are used to reconfigure the resource base either by deleting disused resources or recombining old resources in new ways (Sirmon and Hitt, 2003). At the operational level, dynamic capabilities are required to bring firm level efficiencies and effectiveness in executing business activities. These operational capabilities enable a firm to

earn revenue from customers via repeat business (Gebauer, 2011). Teece (2007) identifies the dynamic capabilities – sensing, seizing and reconfiguring, to be micro-foundational for firms wishing to sustain superior performance in a highly dynamic environment. Taking a conceptual thematic approach Helfat and Peteraf (2003) develop a capability transformation lifecycle with six 'R' branches, retirement (death), retrenchment, renewal, replication, redeployment, and recombination. Before going further we explore the current literature on the subject of hierarchies or orders of dynamic capabilities.

Dynamic capabilities have also been conceptualized as occurring in hierarchies (Collis, 1994; Danneels, 2002; Winter, 2003; Helfat and Winter, 2011) where the purpose is to distinguish between adjusting the resource base and changing the firm's set of dynamic capabilities, which in turn will alter the resource base. Three dynamic capability levels (Collis, 1994; Winter, 2003) have gained prominence. These are first-order, second order and higher order or meta-capabilities. First-order capabilities are the resources themselves (Collis, 1994; Danneels, 2002), also referred to as zero-level (Winter, 2003) and substantive (Zahra et al., 2006). Second-order capabilities (Collis, 1994; Danneels, 2002) also referred to as first-order capabilities (Winter, 2003), or dynamic capabilities (Zahra et al., 2006); are those capabilities that change the product, production process scale or the markets served. Third order capabilities, also referred to as meta-capabilities (Collis, 1994) or higher-order capabilities (Winter, 2003); are those capabilities that facilitate the creation and modification of first-order dynamic capabilities. As firms develop their capabilities over time through learning processes, it has been suggested by Winter and colleagues that they become embedded routines brought about by repetitive practices (Nelson and Winter, 2002; Zollo and Winter, 2002; Winter, 2003). We now explore further the role of a firm's management in the dynamic capability process.

It is widely acknowledged that top management play a key role in developing the vision and ultimately shaping firm's dynamic capabilities (Easterby-Smith, Lyles and Peteraf, 2009; Augier and Teece, 2009). Teece (2007, p.1346) suggests "dynamic capabilities reside in large measure with the enterprise's top management team, but are impacted by the organizational processes, systems, and structures that the enterprise has created to manage its business in the past." Views on the role of top management range from, those who focus on the entrepreneurial actions engaged in by individuals (Yu, 2001), to those who examine the collective actions involved in managing dynamic capabilities (Sambamurthy, Bharadwaj and Grover, 2003). Taking a collective approach Sambamurthy et al. (2003) focus on the term entrepreneurial action that they define as the "dynamic capability of an organization to explore its marketplace, and detect areas of current and future market place threats and opportunities" (p.250). They identify two explicit capabilities, strategic foresight and systemic insight. Strategic foresight signifies the ability to anticipate future threats or opportunities, while being vigilant of current market place dynamics. While systemic insight refers to the ability to visualize and harness knowledge and experience in developing competitive actions, when contrasting the inner and outer views of the firm (Rodenbach and Brettel, 2012).

Zahra et al., (2006) raise two further key points that a firm's management should take into account when examining their dynamic capabilities. First, they highlight that dynamic capabilities are present in new, as well as established firms, and evolve as the needs of a firm changes. Second, they suggest dynamic capabilities develop in response to numerous conditions, which are not necessarily all based on the level of external dynamism. Other conditions can include "(a) perceived external change that does not fully accord with objective facts; (b) learning about external conditions for the first time, and among other things; and (c) internal pressures towards change." (Zahra et al., 2006, p.924). This last point highlights a very important consideration, where the mere possession of dynamic capabilities alone, do not necessarily indicate that a firm will automatically achieve superior organizational performance. Rather, dynamic capabilities must be "well-targeted and deployed in order to achieve strategic goals" (Zahra et al., 2006, p.924).

Gaps in literature

Although dynamic capabilities have received much attention in recent years (Easterby-Smith, Lyles and Peteraf, 2009; Augier and Teece, 2009; McKelvie and Davidsson, 2009; Pavlou and El Sawy, 2011) the term is still in need of theoretical and empirical development (Helfat et al., 2009). Numerous questions arise, such as how can firms engage in purposeful expansive action while simultaneously engaging in path dependent routines? What dynamic capabilities are required by senior levels of management? How can management bring about and monitor strategic change? If we move beyond Ambrosini et al's., (2009) conceptual account of dynamic capability levels, how can empirical evidence, particularly from an in-depth case study, assist understanding on how a firm might engage in significant multilevel change to its capabilities? And, our question: How can a firm leverage its resource base to bring about deep purposeful change?

RESEARCH CONTEXT

Spanair's History

Spanair was founded in 1986 by Scandinavian Airlines System (SAS) and Teinver (ABC, 14/6/2007). The airline became the second largest in Spain in 1994 (El Pais, 31/1/1994), joining the Star Alliance Group in 2003 (SAS, 2007). In June 2007, SAS shareholders (100% SAS owned) announced their intention to sell the airline in order to focus on their northern European operations (Cinco dias, 13/6/2007). A year after, failing to attract satisfactory bids, SAS shareholders cancelled the sale process, announcing their intention to restructure the firm (Cinco dias, 20/6/2008). In June 2008 a restructuring plan, also known as "Plan B" was implemented, which included reducing staff by 1,100 employees (29% of the workforce), reducing the fleet from 63 to 48 aircraft and cancelling some routes, in an attempt to recover profitability (El Periodico, 17/7/2008). Then, on August 20th, 2008, an MD-82 plane owned by Spanair crashed at the Madrid-Barajas airport, with a total of 154 deaths (El Mundo, 26/8/2008). Society was shocked at the largest Spanish aviation disaster in over 25 years (El Periodico, 21/8/2008). The impact of the accident was assessed by management to be 51.6 million euros (third quarter, 2008), escalating to a 455 million euro loss at year close (El Mundo, 3/2/2009).

The Relaunch Project

On January 30th, 2009, 80.1% of Spanair's shares were acquired with a symbolic bid of 1 euro by the firm IEASA. SAS remained as an industrial partner with 19.9% of the shares, and agreed to absorb prior debt (500 million euros) and any possible compensation for the 2008 accident (El periodico, 18/8/2009). The acquisition led to the appointment of a new top management, and chairperson, and the injection of 100 million euros (Cinco dias, 30/1/2009; 31/3/2009). The key objectives of their new business plan were to develop a hub for international flights at Barcelona airport and to return the airline to profitability (Cinco dias, 6/5/2009). The greatest changes occurred over a period of one year, including: the launch of a new commercial image (El Periodico, 13/5/2009); the opening of the new T1 terminal at Barcelona airport along with the relocation of its operations to this new terminal (Cinco dias, 17/6/2009); the appointment of a new executive team (Cinco dias, 26/8/2009); the relocation of its headquarters (Cinco dias, 14/9/2009) and a significant downsizing in staff (Cinco dias, 23/11/2009). The firm had succeeded in reducing its debt, however, had not reached a point of generating a profit in 2010. During the third quarter of 2010 the Regional Government (majority shareholder of IEASA at that time) injected public capital in order to avoid Spanair's bankruptcy (Cinco dias, 6/11/2010). Spanair's competitors responded by submitting a complaint to the European Commissioner for Competition (Cinco dias, 2/2/2011). Despite that the airline had in part achieved its goal of reducing its costs, and its top management wanted to continue, Spanair's senior directors decided to close the airline on January 27th, 2012 (El Periodico, 28/1/2012). Figure 1 shows the chronological sequence of the main events.

In the following sections, we describe our method and then we focus our analysis on the actions and speeches made by Spanair's top management during the project, which was undertaken to relaunch the firm between March 2009 and June 2010. We examine in detail the managerial goals, intentions and outcomes in order to develop a fine-grained understanding of the processes that took place in attempting to change this firm.

Insert figure 1 about here

METHOD

Case Selection

We selected an in-depth single case study for several reasons. First, our research question required detailed investigation into how a firm leverages its resource base to bring about change in the face of a dynamic external and internal environment. Our line of questioning, in asking a 'how question' is ideally suited to using a grounded, interpretive approach with a longitudinal case-study. Using this method enabled us to provide detailed descriptions of the processes used by the firm, including the role of management in the reconfiguration of the firm’s resource base (Easterby-Smith, Lyles and Peteraf, 2009). The case study approach facilitates the use of rich observational material (Locke, 2001) to extract granular data (Yin, 2003) from which the phenomenon under investigation, including the key variables and the relationships between them, can be explored (Eisenhardt, 1989). Second, we were able to develop a thorough and accurate understanding of how the firm’s senior management created a new goal directed path, as well how it simultaneously expanded and adapted its path dependent routines. This observation was made possible by examining numerous data sources. Selecting a firm in the airline industry, meant rich sources of information were readily available on a sector with well-defined markets that has intense competition among players (Gimeno, 1999). This industry has been used in the past to make in-depth observations in order to understand evolving processes such as learning, change and competitive dynamics (e.g. Haunschild and Ni Sullivan, 2002; Benkard, 2000; Chen, Su and Tsai, 2007). Third, we aimed to increase validity and reliability of our findings by collecting and triangulating data from these various sources. Fourth, our review of the literature showed there had been no prior in-depth empirical investigation into role of senior management in bringing about purposeful strategically directed change at a multi-hierarchical level of dynamic capabilities. Instead of aiming for general representativeness, the underpinning rationale in the design of this research design called for an inductive, qualitative single case-study. We wanted to increase understanding on the relationship between senior management and the strategic change the firm’s resource base underwent.

Our use of an in-depth data-set that covered the period 2007 to 2012 of a single firm enabled us (a) to develop a fine-grained understanding of the internal and external capabilities used by the firm, and (b) to closely investigate how the senior management of this firm strategically changed its resource base over a time of heightened internal and external dynamism.

Data Collection

Using the case study approach, we closely followed Spanair between 2009 and 2010, collecting data on the significant changes this airline underwent during this time, as well as on the life span of this airline from 2007 to 2012. We reviewed more than 2,000 articles published in economic journals (Expansion, Financial Times and Cinco dias); over 3,000 articles in Spanish general newspapers (El País, El Mundo, ABC and El Periodico); and 400 multimedia files from TV channels and radio stations (Televisión Española, Antena 3, Televisió de Catalunya, BBC and Catalunya Radio). This wide source of documentation enabled us to triangulate our findings. We selected data within this range that was most directly relevant to the phenomenon of change for the firm, reviewing material until a point of saturation was reached (Eisenhardt, 1989; Miles and Huberman, 1994; Eisenhardt and Graebner, 2007; Gibbert and Ruigrok, 2010). Our final database contained 495 media documents: 436 newspapers full text articles, 12 corporate reports, 13 audio and 34 video files. This data included internal (e.g. Annual firm's reports and interviews with management) as well as external data sources (e.g. newspapers articles). While we collected and analysed all relevant data, in our findings section, we provide selected examples from the many accounts that appeared in the data.

The Spanish mass media had covered Spanair's evolution extensively, particularly after the 2008 air disaster. In addition, the firm had a policy of open communication, enabling the society in general to observe its managerial decisions. Spanair's new chairman, Ferran Soriano reported in a TV show: "Opening the doors of Spanair [to the mass media] was in the spirit of the project as a collective challenge" (TVC, 25/1/2010). As a result, we were able to obtain rich published data on for example, recordings of actual management team meetings, management presentations to employees, interviews, and thousands of articles in the press.

Coding and Analysis

All documents were entered into Atlas.ti7 qualitative research software. Our analysis then took place over four key stages. First, one of the authors wrote a rich contextual case study outlining in date order the key steps Spanair's management took to develop its capabilities. Second, this data was discussed with the second author, who had independently read 70% of the original material from the various data sources, in order to increase the validity of its content (Lincoln and Guba, 1985). Third, we followed the data reductionist method by comparing and contrasting (Collis and Hussey, 2009; Strauss and Corbin, 1990; O'Reilly, Paper and Marx, 2012) the case study material, keeping in mind the research question. Fourth, we developed a coding schema (see Figure 2) that identifies the grounded categories of the main events of interest from the case study. Along with developing the categories, we identified links between these categories. These emergent links enabled us to cluster categories into theoretically induced themes at a more abstract level. Conceptual themes include the patterns of change that were conceptualized as dynamic capabilities as the overarching dimension. Figure 2 shows the coding schema we developed.

Insert figure 2 about here

FINDINGS

This section presents findings on the processes Spanair used to bring about significant change to its resource base. We identify how the processes involved goal directing, adding, integrating, transferring and shedding. We discuss how, Spanair's shareholders (senior directors) and its top management engaged in the respective processes of goal directing and renewing that worked to collectively transform this firm at a time of high internal and external environmental turbulence.

Goal Directing

Spanair changed ownership in 31/1/2009, when the firm IEASA acquired 80.1% of Spanair shares from SAS. IEASA was created by a group of private companies and government institutions (including Regional Government and Barcelona's City Council). The new shareholders charged Spanair's top management with implementing two key financial goals. First was to reduce debt and turn the airline into a profitable business over two years. Second, was to increase the value of the firm by 500 million euros in three years (El Mundo, 19/5/2009). From the beginning, the partners of IEASA and the managers of Spanair, readily acknowledged that returning the airline to profitability would be a high risk project. In the words of Mr. Gaspart, president of the Tourism of Barcelona Consortium (IEASA shareholder): "We shall see if we can make the firm profitable in two years, the operation is high risk" (Cinco dias, 17/4/2009).

How these goals were to be achieved centred on two key plans. First was to develop a centralized hub where flights would be concentrated around Barcelona airport. Second, was to downsize Spanair. Several months after the acquisition, Spanair's new Chairman, Mr Soriano presented his business plan, describing the main goal of the airline in these words: "The goal of the airline is to turn Barcelona into an international hub and connect the city with the world" (El Mundo, 19/5/2009). The intention was supported by the president of the Star Alliance Group, Mr Albercht who responded "The [Star] Alliance will work with its partner, Spanair, to continuous improve the hub of Barcelona, providing connectivity and taking advantage of the new facilities" (El Periodico, 31/1/2009).

It was envisaged that Spanair and its partners from Star Alliance would become the main providers and would centralize international connections from the new Terminal One (T1) that was scheduled to open in Barcelona by June 2009 (Cinco dias, 16/6/2009). Managing an airline and relocating its operations to Barcelona to create an international hub was perceived by some private companies and by government institutions as a strategic decision, as the Minister of Public Works pointed out "this operation might be strategic for Catalonia" (El Periodico, 8/1/2009), and a few days later the Barcelona's Mayor stated more precisely: "It is vital that an airline establish international connections from Barcelona with the rest of the world. This year we will have a great airport, but it is necessary to have a firm strategically operating from Barcelona" (El Periodico, 27/1/2009). Both opinions are significant, because the consortium of government companies that invested in Spanair through IEASA were managed by the Regional Ministry of Public Works and the Barcelona's City Council and ultimately held external power in seeking external funding for the airline. From our database we identified that there were two key levels of activity in Spanair's management. Its shareholders developed the goals for the airline while its top management attempted to implement these goals.

Spanair's top management were charged with the task of implementing two key goals simultaneously. First was the creation of an international hub. Second was reduced the firm's debt. The implementation plan was launched in May 2009, which included restructuring and relocation, where it would concentrate its operations on a new hub, and downsize. The main changes took place over one year (May 2009 to May 2010). We summarize in Table 1 how these key changes were implemented, where we specifically focus on the processes involved in changing Spanair's resource base. Although the types of resources involved in this change were different in nature we found several patterns emerge in how these changes were brought about. We explain these patterns as processes that changed Spanair's resources base. These processes are, adding, transferring, integrating and shedding.

Adding Process

We identify the process of 'adding' that took place as the firm secured new resources from external sources rather than developing them from its existing resource base. These added resources were of both a tangible and intangible nature, bringing with them new knowledge and expertise provided by the individuals who joined the firm.

The first adding took place at the executive level. We found several examples of top management members being added after IEASA acquired Spanair, such as the appointment of the Chairman Ferran Soriano by the new Board of Directors. Mr Soriano brought with him experience in business planning, particularly in his ability to take into account the interests of the incoming shareholders. He also defined new decision-making criteria for the top management team (Catradio, 14/5/2009, Cinco dias, 15/6/2009; TVC, 25/01/2010). Also, a new CEO Mike Szucs was added who brought experience in managing budget airlines (Cinco dias, 21/5/2009). This new expertise led to the development of new goals for improved aircraft utilization and changes in the firm's operating procedures (Cinco dias, 29/10/2009). This pattern of adding expertise at the executive level was followed by new appointments to the top management team and to middle managers (Cinco dias, 26/8/2009).

The adding process was also evident among the firm's physical resources, where the most relevant one was the exclusive use of the T1 terminal at Barcelona airport upon its opening. The T1 provided the latest airport technology infrastructures. Spanair and Star Alliance had an initial advantage over all their competitors (One World, Sky Team and low budget airlines) securing exclusive use of these facilities. This enabled Spanair and Star Alliance to offer improved customer service (e.g. reduced connection times and distances, more comfortable spaces and brand new facilities) (TVC, 7/1/2010; El periodico, 15/9/2009). The opening of the new terminal was used to promote to media the image that Spanair was a networked airline committed to connecting Barcelona with the rest of the world through its new hub at T1 (Catradio, 7/6/2009).

Transferring Process

'Transferring' is the term we give to the process the firm engaged in when moving its resources from one physical location to another, while these resources remained in the firm. This particular process occurred on several occasions in Spanair.

In January 2009, Spanair had three operating bases in Madrid, Palma de Mallorca and Barcelona, where Madrid was its central operating base (Cinco dias, 29/10/2009). The firm's top management decided to transfer its main operating base from Madrid to Barcelona's T1 terminal. Spanair moved 16 aircraft and 500 vehicles on 17/6/2009, with the participation of 1200 people (Catradio, 14/5/2009). Spanair's top management decided to transfer its operational base during the season when it had greater demand (El Periodico, 14/6/2009). While this move had some risk attached Spanair want to show it was commited to achieving its goal of developing an international hub at Barcelona by being the first airline to take off from T1 terminal.

While simultaneously transferring its main operating base, Spanair's top management, in consultation with the senior directors, decided to relocate its administrative headquarters from Palma de Mallorca to a new corporate building in Barcelona (El Mundo, 12/6/2009). The transferring process included a plan with exceptional measures for retaining and transferring the firm's key knowledge, with the assumption that most employees would resign instead of moving to Barcelona (El Mundo, 12/6/2009). The relocation plan generated much controversy among employees based in Palma de Mallorca, with 512 people at that time (El Mundo, 10/6/2009, 12/6/2009). Spanair's top management had not foreseen that its employees from Palma de Mallorca would call for an indefinite strike that in turn led to delays and cancellations in flights in August 2009 (El Periodico, 7/8/2009; El Periodico, 19/8/2009).

Other transferring processes included the transfer of Spanair's maintenance service to the new hub, which involved all maintenance staff and the maintenance equipment to a new hangar at T1 (Cinco Dias, 2/9/2009).

Integrating Process

The ‘integrating’ process involves recombining added resources external to the firm with existing resources in the firm. For Spanair this involved integrating image, operational and infrastructural processes.

The goals of Spanair’s top management to significantly transform the airline led to a number of references in the data being made regarding the challenges of building and maintaining a favourable external image while integrating the realities of managing existing workers where some would be forced to make decisions that wouldn’t normally be required to make. In a statement by the Chief Human Resources Officer at a management meeting (May, 2009): “On the one hand, we want to have this fantastic feeling that this is a reborn airline and everybody should feel great about being on this journey. But 700 or 800 people won’t make this journey. We have an organization which is socially feeling like this right now, still in this kind of pressure cooking mentality” (TVC, 7/1/2010). Or as expressed by the Communication Manager in an executive meeting in June 2009: "The information that is coming out in the newspapers and media about Spanair is actually very positive with respect to our reality. So this is going to change overnight and suddenly. And when I speak with reporters, everyone tells me, ‘You are doing very well. The T1 is fabulous. The T1 is Spanair going ahead. When are you going to Sao Paulo?’ And the reality is completely different. "(TVC, 7/1/2010).

The appointment of new managers to the existing staff revealed the integrating process. The integration of two different ways to manage the firm was reflected in the recordings of board meetings. This example shows the discrepancies in the airplane utilization rates between the new CEO (Mike Szucks) and the existing Chief Operating Officer (Javier Mendoza) in June 2009. M. Szucs: “Ok, 8.7 hours, that’s not a stressed schedule. You really confuse me. I come from a world where 12 to 12.5 hours with a 25-minute standby is a regular rate of utilization. 9 hours is not. Even if it was 10” (TVC, 7/1/2010).

Other examples of the integrating process occurred in order to create the Mediterranean hub of Star Alliance. Developing this hub required Spanair to integrate its operational and infrastructural resources with those of its Star Alliance partners. "On 16th June, the airline group Star Alliance opened the T1. This alliance is formed by 14 airlines and connects 42 cities with Barcelona.They do more than 740 flights each week and they are the main clients of the [Barcelona] airport" (TVC 7/1/2010). The integrated resources of Star Alliance became evident through the flight interconnections among group members and by the opening of new routes with a shared code "Spanair has managed to weave strong relationships among Star Alliance airlines, which fly from its new hub in Barcelona" (Cinco dias, 4/6/2010).

Shedding Process

We identify the shedding process to include the removal of resources, routines, skills or experience from the organization. Shedding was brought about as Spanair's top management decided that not all of the firm's resources could be integrated with its new ones; since some of its resources had now ceased to provide value. This process was found to be an integral one in transforming this firm's resource base.

A key step in the shedding process occurred when a number of senior managers left the firm in 2009 taking with them years of accumulated experience. Most of the firm's top management had left one year after IEASA acquired Spanair. At the administrative level, most non-operating staff left the firm when its headquarters' transferred from Palma de Mallorca and a subsequent downsizing occurred (Cinco dias, 14/9/2009).

A change of corporate image also involved abandoning some historical symbols that were once important. This resulted in a progressive replacement of symbols associated with their prior image, for example, repainting their aircraft, redesigning its web pages, changing personnel uniforms and redesigning their airport check-in desks (TVC, 7/1/2010).

Other tangible assets to be removed from Spanair included some of its fleet and equipment. The most obvious example was terminating the McDonnell Douglas (MD) old aircraft contracts. Spanair's top management had decided these should be replaced with Airbus (El Periodico, 20/7/2009). Airbus planes reduced operating costs by saving fuel and reducing maintenance costs as well as taking away the negativity associated with MD aircrafts, since the accident occurred in and MD-82 airplane. This decision also involved replacing some operational and maintenance staff, pilots and ground crew at the new location (Cinco dias, 9/11/2009).

Insert table 1 about here

Table 1 summarizes the key changes that occurred in Spanair during the period under review. As outlined above, the transformation process began when the shareholders developed their new strategic goals and appointed a new top management team to implement these goals. These steps were followed by the addition of new resources including managers, employees, image symbols and physical assets. Some existing firm resources were deemed to be still valuable, such as airplanes, machinery, staff or knowledge. However, some resources were shed as the hub location changed and the firm downsized. The recombination of existing resources with new resources involved an integrating process. From the existing resource base, and by repeatedly adding, transferring, integrating and shedding its resources the firm progressively developed a transformed resource base.

DISCUSSION

In this study we examined how a firm leverages its resource base to bring about deep purposeful change in times of heightened internal and external environmental turbulence. Using a single in-depth case study we develop a hierarchical framework with two first order dynamic capabilities, goal directing and renewing, and one higher order capability, transforming (see Figure 3). In this framework we also identify how the link between the goal directing capability of shareholders and the transforming capability, creates a strategic goal directed path. We then identify how the link between goal directing and renewing becomes a goal implementing path. Next, we discuss ways in which these findings inform and extend existing literature.

Insert figure 3 about here

Our dynamic capability hierarchy framework extends existing literature in three key ways. First, our empirical investigation deepens understanding on hierarchies from conceptual accounts on change (e.g. Ambrosini et al., 2009). Second, our examination identified the processes involved in resource change when a firm is simultaneously experiencing major internal and external turbulence. Often the focused has been on external market turbulence. Third, our identification of a goal directing capability, support authors such as Zahra et al., (2006), Helfat et al., (2009) and Sirmon et al., (2011) with its focus of how core management guide the direction of the firm.

The renewing capability in our framework, enables us to demonstrate how a group of what Winter (2003), Zahra et al. (2006) and Ambosini et al. (2009) refer to as first order capabilities, are used to significantly change and reconfigure a firm's resource base (Agarwal and Helfat, 2009). This capability was applied in order to: introduce new resources by adding them from the outside; transfer existing resources from one location to another; integrate existing resources with the new added ones in new ways; and shed resources that were no longer useful. By repeatedly adding resources, Spanair changed at a faster pace than would have been possible if the resources were developed internally. Spanair's additive process also introduced new knowledge and mindsets. For example, grafting at the managerial level reduced the firm's engagement in repetitive path dependent routines that freed the firm to implement dramatic change over a few months. The grafting of information and knowledge from external sources often leads to faster acquisition than would be possible from experience (Huber, 1991). Chua and Pan (2008) identify knowledge grafting as a strategy for quickly building a firm's knowledge base. Adding resources from outside the firm has been found to be an important dynamic capability in the pharmaceuticals, optical disks, and oil production industries, where cutting-edge knowledge is essential for effective strategy and performance (Eisenhardt and Martin, 2000). Numerous other studies have also identified the value in leveraging or acquiring routines from external sources (e.g., Capron, Dussauge and Mitchell, 1998; Gulati, 1999; Lane and Lubatkin, 1998; Powell, Koput and Smith-Doerr, 1996; Zollo and Singh, 2004).

The transferring and integrating processes refer to the firm's ability to coordinate and recombine new and existing resources, in new ways. This capability is akin to Bowman and Ambrosini's (2003) integration capability, as it involves combining resources in new ways to alter the firm's resource base. It involves the "ways in which the components are integrated and linked together into a coherent whole" (Henderson and Clark, 1990). The integrating process also required effective coordination of these new and existing routines and resources, similar to the coordination capability described by Pavlou and El Sawy (2011). The transferring processes, including the transferring of routines (Hansen, 1999; Hargadon and Sutton, 1997; Szulanski, 1996), were used by managers to copy, transfer, and recombine resources, especially the firm's knowledge-based resources. Transferring organizational knowledge required care by Spanair's management in order to preserve these resources, despite that staff were leaving the firm. These processes were made particularly evident as the airline attempted to integrate its resources and routines to achieve its goal of becoming a new Mediterranean hub that required coordination with the resources and routines of several other airlines.

Exit routines that shed those resources a firm no longer requires, in order to compete, are also critical dynamic capabilities when markets undergo change (Sull, 1999; Eisenhardt and Martin, 2000). We characterised exit routines and removing resources as a shedding process. We found the capability to shed resources played a central role in the renewing process of the firm. This shedding capability routinized the exit of decaying resources. In this sense, it had a positive effect on the firm's resource base, as it contributed to the development of the firm's transformation capability. However, it was found that a careful balance in this capability was required, as any unintentional losses of valuable resources could have detrimental consequences. If we take a knowledge-based perspective, shedding is closely related to the notion of 'managed forgetting' (de Holan, 2011). Organizational forgetting has been identified as a dynamic capability, as it reduces path dependency and prepares the ground for flexibility and radical breaks with the past (Easterby-Smith and Lyles, 2011). However, Spanair incurred higher costs (i.e. strikes, economic incentives to move, and internal training), led to turnover-induced forgetting, as some staff left the firm, taking with them valuable skills and knowledge that were not able to be immediately replaced (Lopez and Sune, 2011). This raises the notion that shedding resources had both positive and negative effects.

The transforming capability that we identify in this study constitutes the entire transformation process in our study. This transforming capability is a higher-order dynamic capability (Winter, 2003) that has some similar properties to Ambrosini et al., (2009) regenerative capability. However, different to Ambrosini, is that our transforming capability is underpinned by the goal directed and renewing capabilities that are jointly required to drive this capability.

Theoretical Implications

From the analysis of our findings we contribute to the literature in the following three ways.

Identifying a Strategic Creation Path: In our findings we identify a goal directing capability that underpinned the actions Spanair's shareholders engaged in. Goal directed actions have been used, particularly from a psychological perspective, to assist in predicting the extent to which internal attributes, such as intention and motivation (Ajzen, 1991), or external environmental features (Gollwitzer and Bargh, 1996), shape the behavioural actions of individuals. It was through this goal directed capability that the shareholders were able to work to develop a strategy where they aimed to consolidate the airline's operations. They believed this high risk strategy would return the airline to a profitable state. The shareholders at SAS (2008) then charged their top management with implementing this goal. However, when this target was not reached, and there was an airline crash, the airline was sold to IEASA in 2009 and the goal directors and goal implementers were replaced by new shareholders and top management. This change of goal directors incidentally forced a renewed strategy and goal directed path.

The process that links the goal directing capability to the higher order transformational capability we identify as a strategic creation path. We suggest this path is important in understanding how significant change is attempted. Path creation involves actors developing aspirations for the future (Stacey, 2007) that may involve a series of pathways forward (Garud, Kumaraswamy and Karnoe, 2010). Unlike path dependence that David (2001, p. 19) suggests is a process whereby its users are 'unable to shake free of their history', path creation, in its purest form encourages new expansive thinking, while it rejects the notion of systematic thinking within closed boundaries. Further, it is suggested our goal directed capability supports authors such as Zahra et al., (2006) and Gavetti et al., (2012) who encourage management to move beyond a focus on exploitation to explore more distant alternatives.

Building a Path Creation – Path Dependency Bridge: Our findings also enable us to identify an important link between the goal directing capability of shareholders and the renewing capability engaged in by top management. We refer to this connection as a goal implementation link. Once the firm's direction had been decided on by its shareholders, Spanair's top management were asked to implement these goals via the renewing process. In the renewing process, the combination of processes that we identify, led the firm to develop a set of interdependent processes that became path dependent routines. These particular processes thereby support Winter and colleague's characterization of dynamic capabilities as complicated routines that emerge from path-dependent processes (Nelson and Winter, 1982; Winter, 2003; Zollo and Winter, 2002). The link between these path dependent routines involved in the renewing process and the path creation process, via the shareholders that we outline above, enables us to develop an important bridge between path creation and path dependence, where both capabilities are important for the strategic direction of the firm. Furthermore, these findings enable us to create important links to the goal implementation process as outlined in strategic reference point theory (Fiegenbaum, Hart and Schendel, 1996; Shinkle, 2012).

Path Adjustment: The operationalization of our renewing capability by Spanair's top management that became a set of interdependent processes, supports e.g. Winter (2003) and Eisenhardt and Martin (2000) who suggest dynamic capabilities consist of a set of path dependent routines. However when taken in its entirety, our hierarchical framework, which also includes the goal directing capability, subsequently enables a bridge to be drawn between path creation and path dependence. This then creates a theoretical opening where we can link dynamic capabilities to other analytical tools such as goal setting and aspiration level adjustment in the Behavioral Theory of the Firm as advocated by Augier and Teece, (2009). Upon creating firm goals, the goal directors need to take into account the firm's collective ability to achieve these goals in light of the internal and external dynamism, where close monitoring and regular adjustment is required.

CONCLUSIONS

Using an in-depth single case approach gave us the advantage of being able to engage in the fine grained examination of the processes involved in bringing about significant change to a firm's resource base, within clearly defined parameters. In this instance, the context of the case was the transformation of resources required in a situation of high turbulence in Spanair, in the European Aviation Industry. We suggest that despite our framework was developed from material gathered on how significant change was brought about in a single firm; this same framework can also be used to improve understanding across a variety of firm types in a wide variety of industries who are contemplating change, particularly significant change.

In our study we have drawn attention to the pivotal role and skill set required by those actors who engage in a firm's goal directing, in this instance, the shareholders of Spanair. We shed light on the value of synchronizing the goal directing role of these actors with those actors responsible for operationalizing these goals. In this case, it was the firm's top management who had the task of implementing an interdependent set of activities that we identified as a renewing capability. We also demonstrated through our goal directing and renewing capabilities how a bridge is created between path creation and path dependence. Further, we explain the importance of understanding that goals set by the goal directors require implementing, and in times of heightening internal and external turbulence, choices of focus are often required. Hence, understanding how to balance path creation and path dependence becomes paramount. We suggest our framework provides a base for further investigation into the nature and types of balances required between path creating and path dependency activities of a firm, in particular, for those firms anticipating major change.

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El Periodico. 18/8/2009. Spanair ha cambiado de propiedad y estrategia.

El Periodico. 19/8/2009. Los trabajadores de Spanair aceptan el traslado a Barcelona.

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Figure 1.Spanair timeline and main events of interest

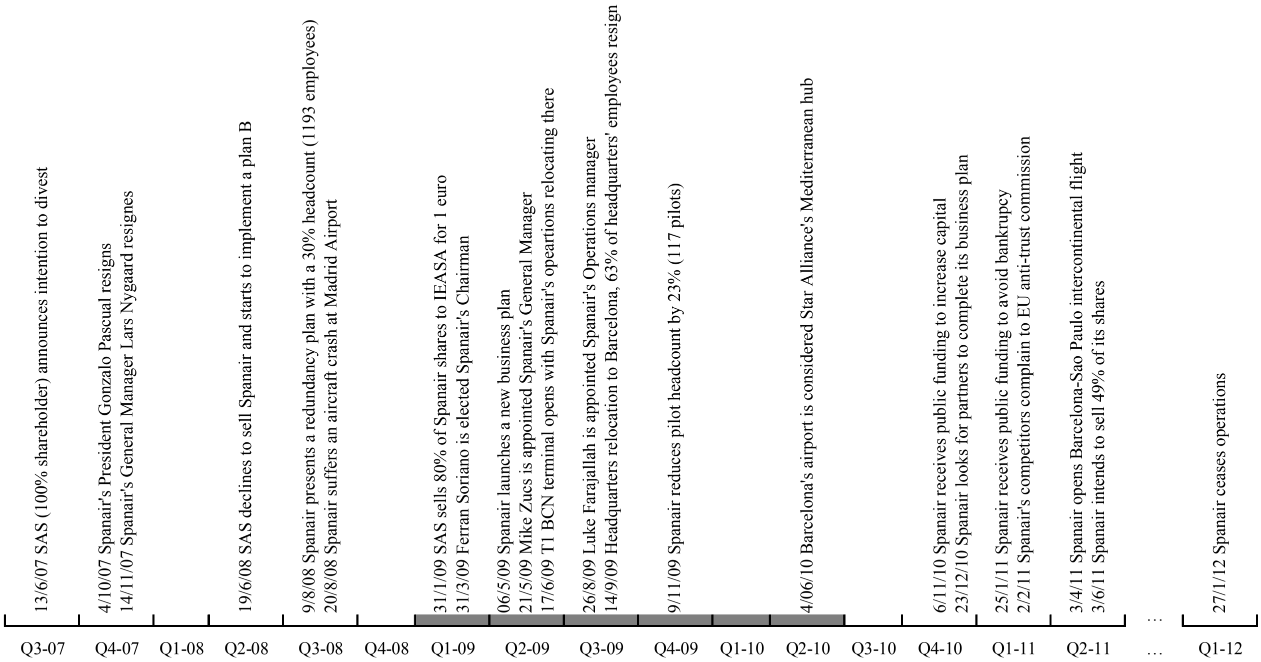

Figure 2. Coding system schema, from grounded categories to conceptual themes and dimensions.

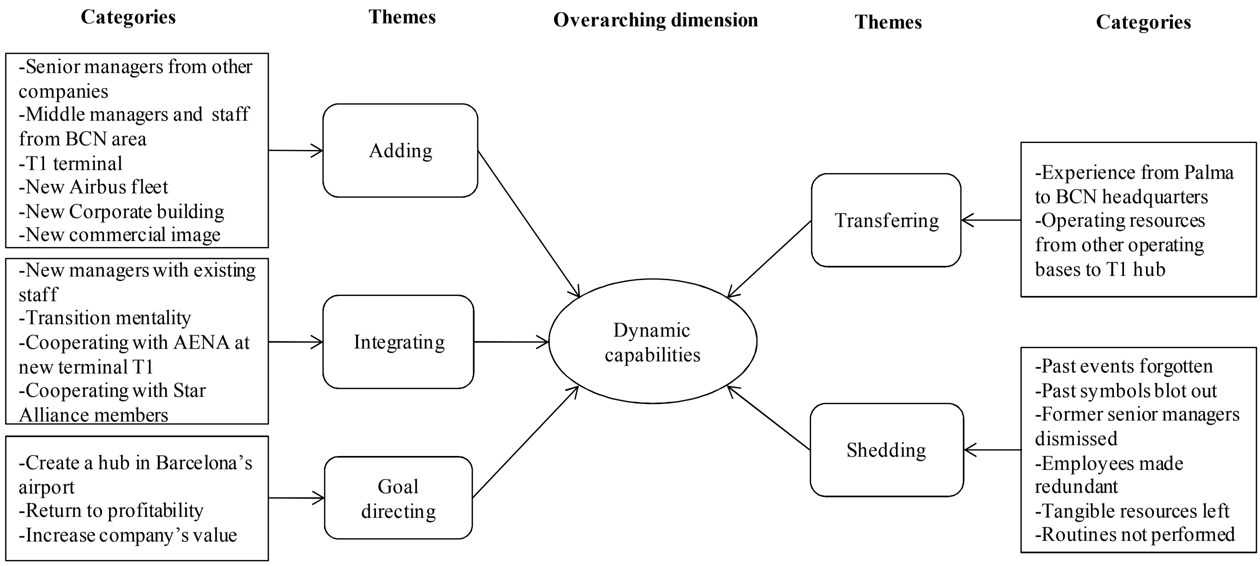

Figure 3. Theoretical model of capability hierarchy at organizational transformation

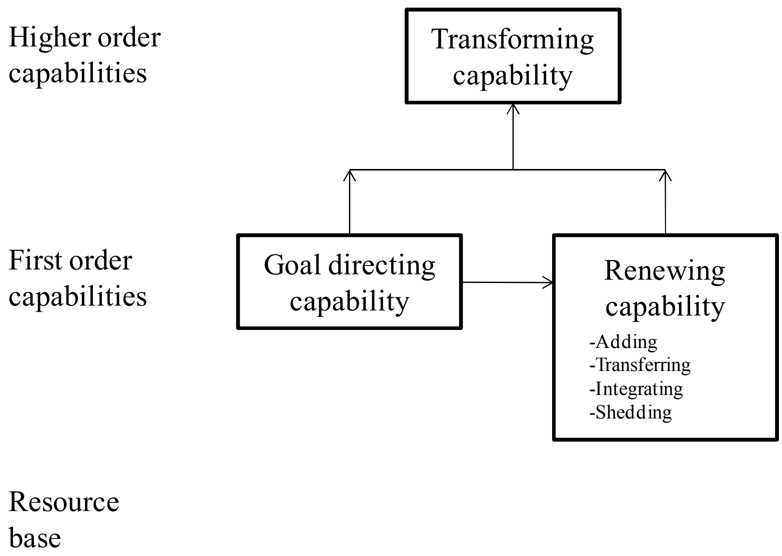

Table 1. Summary of changes implemented 2009-2010

Issue	State at 30/1/2009	State at 31/5/2010
Shareholders *(goal directors)*	SAS (100%)	IEASA (80.1%) SAS (19.9%)
Goals	To sell or to close the airline	To create the Star Alliance's Mediterranean hub To return to profitability To increase the firm's value
Top management team *(goal implementers)*	Lars Lindgren (Chairman) Marcus Hedblom (CEO) Francis Bretch (CFO) Javier Mendoza (COO) Hector Sandoval (CHRO)	Ferran Soriano (Chairman) Mike Szucs (CEO) Jorge Chumillas (CFO) Luke Farajallah (COO) Jordi Juan (Communication Manager)
Operating bases	Madrid's Airport (main base) Palma de Mallorca's Airport Barcelona's Airport	Hub at Barcelona's Airport
Headquarters location	Palma de Mallorca	Barcelona (L'Hospitalet)
Fleet	43 planes (14 MD)	35 planes (6MD)
Routes	Domestic	Reduced domestic flights (i.e. stopped routes from Jerez, Almeria, Bilbao and Valencia to Madrid)
	Continental	Extended continental flights (i.e. Rome, Milan, Venice, London, Amsterdam, Stockholm)
	Non-operating intercontinental	Opened intercontinental flights (i.e., New York, Tokyo, Hong Kong, Sao Paulo)
Crew	516 pilots and co-pilots	366 pilots and co-pilots
Administration Staff	512 (in Palma de Mallorca)	358 in Barcelona (only 141 relocated from Palma de Mallorca).
Image and communication	Old brand image symbols Media focus on fatal accident	New brand image Media focus on future goals