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TESIS DOCTORAL

LA ESTRATEGIA DE SANEAMIENTO EN LAS REESTRUCTURACIONES EMPRESARIALES

(RETRENCHMENT STRATEGY IN TURNAROUND SITUATIONS)

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ABSTRACT

During the last decades and starting the "great recession", businesses have suffered one of its most volatile periods in history. Technology radical changes, fiscal and monetary policies, social changes and the advance of the financial industry have brought for many businesses difficulties which have translated in a situation of bankruptcy or lower profitability for many businesses. Survival is more challenging than ever.

During this decade turnaround research has lagged behind. The 80´s and 90´s turnaround researchers found a number of important insights that allowed for the advance of the research area. However, the number of important pieces of research since then has been scant. One of the most important ideas in the turnaround literature is the two stages model, proposed by Pearce and Robbins (1992). This model proposes a turnaround should start with a retrenchment stage followed by a recovery stage. Although the model has received many critics and the evidence is mixed, the model remains actual.

This dissertation focuses on the retrenchment stage of the two-stages model. The retrenchment stage is the most researched topic and one of the most important topics in the turnaround literature. First, during retrenchment firm survival, rather than a mere increase in profitability, is at stake. Second, the mixed evidence on the stage has been the main obstacle preventing progress of turnaround studies.

We study three topics that have received increased attention in the management literature during the last two decades, which turnaround research has remained silent on. These three topics are extremely relevant to the development of the retrenchment strategy. These topics are dynamic capabilities, CEO change and the temporal dimension of retrenchment. Specifically, we study three topics in this dissertation:

1) The relationship of dynamic capabilities and the two retrenchment strategies (asset retrenchment and cost retrenchment).

2) The conditions under which an early CEO replacement influences turnaround success.

3) The relationship between the time and volume of retrenchment and turnaround success.

In the first study, we posit that despite the assumed importance of environmental dynamism with respect to organizational decline, theory and evidence of its effect are lacking. Integrating work from firm survival and turnaround literature within a dynamic capabilities framework, we posit that dynamism positively moderates the relationship between firm retrenchment and performance. We collect data from SABI on a sample of 230 Spanish declining firms. We find that dynamism positively moderates the relationship between firm performance and both asset and cost retrenchment. However, as expected from the dynamic capabilities framework, the moderating effects of dynamism differ according to the chosen retrenchment strategy.

They are stronger for the asset retrenchment strategy than those for cost retrenchment.

In our second study, we argue that prior turnaround studies have investigated "**whether"** CEOs should be replaced and the related boundary conditions. Given how critical time is for declining firms, we shift this CEO succession research question to **"when"** should CEOs be replaced. We study the effects of the timing of CEO replacement on firm performance. With the support from the downward spiral perspective, we hypothesize the conditions (i.e.: internal versus external causes of decline, CEO tenure and duality) under which early CEO replacement leads to positive turnaround outcomes. Using data from Compustat, we find support for our hypothesized relationships.

In our third study, we posit that recent turnaround literature has shown evidence of the importance of time considerations on turnaround success. We take this topic forward and argue there is a relationship between the volume of retrenchment and time of retrenchment. Declining firms can act aggressively on the depth of the cuts (volume aggressiveness), or on the timing and speed of retrenchment (time aggressiveness). Based on the survivor syndrome and the downward spiral perspectives, we argue and show evidence that time aggressiveness influences volume aggressiveness which will determine the outcome of the retrenchment process.

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FIRST CHAPTER

INTRODUCTION

1. Background

During the last years the business environment has suffered a period with the most radical changes in business history. Those changes have generated opportunities for some companies, but have brought about difficulties for others.

First, technology has radically changed the way business is done. Firms use more technology than ever to operate because they are able to produce goods and provide services at lower prices or in a better or more efficient way. The price reduction derived from the introduction of technology has allowed a large number of small firms to challenge the turf of larger businesses who traditionally coped a market. New firms with innovative business models have captured market share from established businesses. Finally, technology has widely dispersed information, which has put an excess of pressure on firm pricing strategies.

Second, financial markets have also revolutionized the way business is done. There has been an increase in the number of fund managers who are more specialized in all types of niche markets (for example: hedge funds, private equity funds, venture capital funds). They act fast to have money flow to the opportunities they spot. Also they are able to assess better than ever before the relationship between risk and reward. Finally, they have become increasingly powerful given the amounts managed by some of them have exceeded the hundreds of billions.

Third, the low interest rate environment of the last decade has implied a number of market distortions. The stock market has surged beyond belief due to a low cost of capital in the valuation of the stock. Also, given the low cost of financing, debt has become a pervasive element in firms, governments and families. The degree of leverage is very high among firms and with it the increasing risks of going into bankruptcy. In fact, as we write this lines, interest rates (12 months Euribor rate) have entered the positive territory after five years in the negative.

All these changes have turned a challenging environment for a large number of firms. These conditions have put pressure on them, increasing the number of businesses that have become bankrupt, are on the verge of bankruptcy or remain profitless with increasing amounts of debt. The root problem is twofold. On one hand, there are those firms, which have not adapted to the new environment (i.e.: Isolux, Abengoa in Spain; Blockbuster, Border´s Café, Kodak, elsewhere). On the other, some industries have become extinct or are in a process of a declining low munificent environment (i.e.: camera, watches, automobiles, traditional hotels, etc…). Firms operating in these environments are struggling for survival.

In summary, the changes in the environmental conditions have created difficulties for a large number of firms. As a consequence, the study of firm decline has become more important and necessary. During the 80´s and 90´s turnaround research received increasing attention. After the mid 90´s turnaround works have become scant and far in between and since then,

the pieces of research considered important do not amount to more than ten. In the meantime, research methodologies, databases and theories have exploded in the business and management areas. Our aim is to contribute with this thesis to the turnaround literature by researching some aspects critical to the turnaround literature through the use of this new academic upbringing.

2. Decline and turnaround

Firm decline is an event that takes place when the performance of an organization deteriorates or when the resources become eroded over a lapse of time (Hambrick & D´Aveni, 1988; Weitzel & Jonsson, 1989). Firm decline is to business what a malaise is to the body. Parellellism between the medical science and firm failure abounds in the turnaround literature (Arpi, 1999; Bibeault, 1982; Davis, H., Sihler, 2002).

The causes under which an organization becomes in decline can be internal and external (Argenti, 1976; Cameron, Sutton, & Whetten, 1988; Hofer, 1980; Johnson, 1996). Under external causes of decline, the environment is the driver of the organizational decline. The decline is based on a change in the general environment or in the industry. Some of the external causes most mentioned by the literature are technological changes, demographic changes, competitive pressures among the firms within the industry, economic downturns, etc (Balcaen & Ooghe, 2006; Burgelman, 1994; Grinyer

& McKiernan, 1990; Lawton, Rajwani, & O'Kane, 2011; Shein, 2013). Under internal causes the firm is responsible for the decline, this is, the decline is firm based. The most common internal cause is bad management, represented by a CEO who mismanages the firm (Bruno & Leidecker, 1988; Heracleous & Werres, 2016; Trahms, Ndofor, & Sirmon, 2013). Firm mismanagement can derive from pure managerial incompetence, an unbalanced TMT or a weak financial or commercial department (Barbero, J., Di Pietro, F., Chiang, 2017).

The causes of decline is one of the most overlooked topic in turnaround research: unsufficient attention has been paid given the importance the lever the topic has to turnaround success (Hopkins & Hopkins, 2006). The probability of turnaround success is mostly driven from whether the causes of decline are external or internal. The probability of turnaround success is greater when the firm is aching under internal causes of decline: the solution is in the firms hands (Hopkins & Hopkins, 2006; Shein, 2013). In contrast, when illness derives from external causes, the option the firm has is to wait for a change in the environment or to strategically reposition the firm. They both are options difficult to achieve.

One critical issue on which the causes of decline rely is perception. TMTs may misperceive the degree of the decline or perceive the decline and misinterpret the causes of decline. Long tenured CEOs tend to attribute more often decline to external causes, whereas recently appointed CEOs attribute such to internal causes (Barker & Patterson, 1996). Attribution errors bias management perceptions on the root of the decline situation. It is also

common CEOs creating a gap between perception and reality on the severity of the situation (Slatter, 1984).

3. Retrenchment

A turnaround involves a series of actions as response to a situation of decline. The aim of these actions is to reverse the situation of decline (Robbins & Pearce, 1992). In the past, authors have proposed several models of turnarounds (Arpi, 1999; Bibeault, 1982; Schoenberg, Collier, & Bowman, 2013; Slatter, 1984). The model most used by researchers has been the Robbins & Pearce (1992). This model consists of two stages: retrenchment and recovery. During the initial retrenchment stage the firm introduces actions to achieve cost and asset reductions (Michael & Robbins, 1998). These actions have been argued to have an operating nature (Trahms et al., 2013). There are two types of retrenchment actions or strategies: asset retrenchment and cost retrenchment. Asset retrenchment involves the net reduction of assets (Lim, Celly, Morse, & Rowe, 2013). Some examples of asset retrenchment are closing plants, selling property or equipment, reducing inventory (Lim et al., 2013; Morrow, Johnson, & Busenitz, 2004). Cost retrenchment deals with the reduction of costs. It involves the reduction of Selling, General and Administration (SGA), interest, salaries, perks, advertising and marketing costs (Lim et al., 2013). Cost retrenchment is generally used when the situation of decline is more severe (Pearce II & Robbins, 1993). Recent research has argued that retrenchment actions also have a strategic nature, beyond the

operational nature, given some of these measures are implemented with the intention to set new directions for the firm (Barbero, J., Di Pietro, F., Chiang, 2017).

During the recovery stage, the firm adjusts the domain of the firm to align it to the environment. The actions carried out during this stage possess a strategic nature (Trahms et al., 2013) because the aim is to reposition the company with the objective of growth and profitability (Barker III & Duhaime, 1997; Pearce II & Robbins, 1993; Schmitt & Raisch, 2013). The two stage model has been widely criticized. Literature has argued that the implementation of both type of measures, retrenchment and recovery, are not always necessary (Barker & Mone, 1994). Also, it has been argued that both stages can be simultaneously implemented (Schmitt & Raisch, 2013).

The focus of our dissertation is the retrenchment stage and the actions carried out during this stage. There are three reasons for such. First, the retrenchment stage has been one of the most controversial ideas in the turnaround literature (Barker & Mone, 1994; Pearce & Robbins, 1994; Robbins & Pearce, 1992). The evidence on the value of retrenchment actions vary widely. Studies have only managed to get consistent results under a very contingent approach. Hence, contributions in this research niche will help the advance of turnaround research, which has remained stalled during the last decade. Second, the retrenchment stage is more unique to turnarounds. The recovery stage is typically when the organization is zero or positive cash flow, and the firm degree of urgency is lower. The study of recovery is not unique to

turnarounds but can be and has been studied in other firm situations beyond decline. Third, the aim of retrenchment actions is corporate survival (Pearce II & Robbins, 1993). From our perspective, survival is a more important activity than a mere improvement in corporate results.

4. Retrenchment and dynamic capabilities

The dynamic capabilities framework has been one of the most researched areas during the last two decades. Only in the last decade more than one thousand papers have been published on the topic (Peteraf, Di Stefano, & Verona, 2013). This is due to the role of dynamic capabilities on the generation and sustainability of a firm´s competitive advantage (Teece, 2014).

Firms possess broadly two types of capabilities: ordinary and dynamic capabilities. An ordinary capability allows firms to deploy resources to earn a living in the present (Collis, 1994; Schilke, 2014). A dynamic capability allows an organization to purposefully create, extend, or modify its resource base (Helfat et al., 2007). Dynamic capabilities fall under three clusters of activities: sensing, seizing, and transforming (Teece, 2007, 2012). Given that dynamic capabilities may be rooted in certain change routines and turnaround management is composed of transformational capabilities, the question arises as to whether turnaround strategies involve dynamic capabilities. Limited works have directly linked turnarounds with dynamic capabilities

(Danneels, 2011; Zúñiga-Vicente & Vicente-Lorente, 2006), which remains a strong candidate for research (Teece, 2012)

Addressing turnarounds through a dynamic capabilities framework is important for two reasons. First, dynamic capabilities represent a framework used in change situations. Setting the boundaries for the framework is important to delineate its application. Given that turnarounds represent situations of extreme change, the evaluation of whether the framework is applicable to turnarounds represents the testing of the framework boundary conditions. Second, the literature is concerned that turnaround research has been mainly phenomenon-driven rather than theory-driven (Trahms et al., 2013). Finding links between turnaround and other theoretical frameworks is key for the advancement of research in the turnaround field.

In line with other studies which test whether certain capabilities are dynamic (Drnevich & Kriauciunas, 2011; Schilke, 2014), we replicate their methodology to assess how dynamic are retrenchment actions. We test whether the two type of retrenchment strategies, asset retrenchment and cost retrenchment influence turnaround performance in an environment characterized by its high dynamism.

5. Timing of CEO replacement and turnaround success

The reduction of personnel is part of the cost retrenchment strategy (Lim et al., 2013; Morrow et al., 2004). One of the most important decisions by a

declining firm is about leadership (Bibeault, 1982; Slatter, 1984): should the existing CEO be removed and under what conditions should the CEO be removed. Beyond the area of turnarounds, CEO succession has been studied with inconclusive results (Krause, Semadeni, & Cannella, 2014). Again it has been proposed a contingent approach to its study given the mixed results (Berns & Klarner, 2017). In the turnaround area few studies have covered this important topic (Barker & Patterson, 1996; Chen & Hambrick, 2012; Davidson, W; Worrell, D; Dutia, 1993). Those studies have also shown more conclusive results. However, the models proposed tend to be underspecified and little we know about the conditions under which CEO replacement should occur under organizational decline.

The study of time has become a promising avenue for the advance of turnaround research. We use the temporal approach to study the timing of CEO replacement. Based on this line of research, we shift the question not to whether CEO should be replaced but when should a CEO be replaced. In other words, we study the timing of CEO replacement in a situation of decline and the conditions under which the CEO should be replaced early. Specifically, we study and argue that if the causes of decline are external, and hence less controllable by the CEO, replacing management later improves turnaround success. Contrastingly, we also argue that in the case of internal causes of decline and for these same reasons, a CEO should be replaced early. Second, we also study whether the length of the tenure during which the CEO has remained within the firm has any interactive effect

on the relationship between early replacement and turnaround success. Tenure has been one of the variables showing more consistent results in the study of CEO succession (Barker & Patterson, 1996; Hambrick & Fukutomi, 1991; Henderson, Miller, & Hambrick, 2006). Finally, we study how if the firm has a dual structure (CEO and President are same person), the later the CEO is replaced, the longer the dual structure is maintained, the greater the turnaround success. This is argued on the basis of the need for unity of command in a situation of decline, which will allow fast decision and fast action (Dowell, Shackell, & Stuart, 2011; Finkelstein & D´Aveni, 1994). The effects of time have not been studied in the CEO succession literature or the turnaround literature. Additionally, decline is a very valid context to study the effects of time (Barbero, J., Di Pietro, F., Chiang, 2017) and also the study of CEO replacement (Chen & Hambrick, 2012).

6. Retrenchment and time

The study of the general patterns of change requires a focus on the temporal context (Pettigrew et al., 2001; George & Jones, 2000). A few temporal dimensions of change–timing, speed and rhythm (Ancona et al., 2001; Huy, 2001)–have been the focus of studies in a diverse range of management areas such as internationalization, mergers and acquisitions, product development, new ventures, and so on (Vermeulen & Barkema, 2002; Bauer & Matzler, 2014; Atuahene-Gima, 2003; Klarner & Raisch, 2013; Gersick, 1994; Amis et al., 2004; Pacheco-de-Almeida et al., 2014). The study of these temporal dimensions has shown promising results. In addition to

showing evidence of how these variables influence firm performance, prior studies such as the seminal paper by Vermeulen and Barkema (2002) and the extant research on firm internationalization have brought new perspectives to the research on change. Thus, the study of the effects of time is well developed in other change-intensive areas of management research with very positive results.

In few areas are these temporal dimensions of change -timing, speed, and rhythm- as critical as in the context of turnarounds. The turnaround literature overwhelmingly agrees that early timing and a fast speed of change are critical to firm survival (Pearce II & Robbins, 1993; Slatter, 1984; Hambrick, 1985; Arogyaswamy et al., 1995). Researchers consistently posit that timing and speed are most important during retrenchment, which is the initial stage of a turnaround, when the survival of a firm is at stake (Arogyaswamy et al., 1995; Pearce II & Robbins, 1993). Thus, the literature on turnaround is strongly grounded on the assumptions of the need for early timing and a fast pace of change due to the urgency of the situation. Recent research has shown promising results on the study of time in a turnaround context. Tangpong, Abebe, & Li (2015), Barbero, J., Di Pietro, F., Chiang (2017) and Barbero, J., Martinez, J.A. and Moreno A.M. (2019) have studied with positive results the effects of time on turnarounds. The first piece of research studies whether time (early/late retrenchment) influences turnaround success. They use a very sophisticated methodology and use a large number of dependent variables to confirm the positive influence of time on the effect of

retrenchment; this is, an early timing of retrenchment positively influences turnaround success. The second piece of research is a much more sophisticated study that breaks down the time construct into three subdimensions (timing, speed and rhythm of retrenchment) and analyzes the influence of each on turnaround success. This study also tests the effects of a munificent and of a dynamic environment on the three dimensions of time. Finallly, the last piece of research has introduced the idea of retrenchment aggressiveness dividing such into volume aggressiveness and time aggressiveness. This research studied and found a positive effect of time aggressiveness and a negative effect of volume aggressiveness on turnaround performance. Finally, the study found an interaction effect between volume aggressiveness and time aggressiveness on turnaround success.

Those pieces of research study the topic using the "downward spiral" and "survivor syndrome" perspectives (Hambrick & D´Aveni, 1988; Brockner, 1992). These perspectives are well-fitted frameworks to the area of turnarounds and have been used very often in research. Management literature has used other frameworks to explain the effects of time on change. One of the most used frameworks has been the speed of decision and speed of action frameworks (Baum & Wally, 2003; Eisenhardt, 1989; Forbes, 2005; Rajagopalan, Rasheed, & Datta, 1993). Given the complexity of turnarounds and time, it is advisable to fine grain more the origins of a positive relationship between time of retrenchment and turnaround success. In lieu of a multi

theory approach necessary to explain the complexity of decline and turnarounds, we use those two frameworks to argue a mediation effect of volume aggressiveness on the positive effect of time aggressiveness on turnaround outcomes. As a third question of research we analyze the subtle but important relationship between volume aggressiveness, time aggressiveness and turnaround outcomes.

7. Methodology, samples and variables

The methodology used in most cited turnaround studies tends to be very complex. First, the selection of the firms in decline includes a large number of firm characteristics (industries, degree of concentration, number of employees, etc) that makes the sample selection a gruesome process. Second, these studies either use a dichotomic variable -turnaround success/non success- (Barker III & Duhaime, 1997; Chen, 2014; Ndofor, Vanevenhoven, & Barker, 2013; Tangpong et al., 2015) or use panel data (Chen & Hambrick, 2012; Morrow et al., 2004). We have followed the methodology used by top researchers. Below we include a table describing for each of the three studies the methodology, sample and variables:

Table 1

Methodology

	Second Chapter (Paper I)	Third Chapter (Paper II)	Fourth Chapter (Paper III)
Data analysis technique	GMM (Generalized Method of Moments)	Logistic Regression	Logistic Regression and OLS
Selection bias	----------	Heckprob procedure	Heckprob procedure
Survival bias	------	Matched-pair	Matched-pair

Table 2

Samples

	Second Chapter (Paper I)	Third Chapter (Paper II)	Forth Chapter (Paper II)
Items	230 (Spanish declining firms in turnaround situation), Implementing retrenchment measures (assets or/and cost)	80 (S&P 1500 index declining firms, pair matched for CEO replacement/Non replacement).	264 (Compustat declining firms, pair matched for several variables).
Period	2000-2005	1996-2007	1990-2001
US SIC Codes	2000-3999	All	2000-3999
Database	SABI	Compustat (financial data)/ US SEC (Edgar)/Execucomp	Compustat (financial data)/ US SEC (Edgar)/Execucomp

Table 3

Variables

	Second Chapter (Paper I)	Third Chapter (Paper II)	Forth Chapter (Paper II)
Dependent variables	ROS Return on Sales (t+2)	Turnaround success (Dichotomic)	Turnaround success (Dichotomic)
Independent and moderating variables	Dynamism Asset retrecnhment Cost retrenchment	Timing of replacement Munificence Causes of decline CEO Tenure Firm duality	Time aggressiveness Volume aggressiveness
Control variables	Severity Firm age Firm Size Leverage Liquidity Slack Munificence Times dummies	Altman´s Z Capital intensity Quick Ratio Retrenchment Dynamism Board Size Lambda Times dummies	Employees Capital intensity Age CEO change Board Size Causes of decline Lambda Times dummies

The data analysis software used was Stata V12.

8. Research questions and contributions

As argued earlier, the study of retrenchment is very important because it is one of the most unique features in the research of turnarounds. Turnarounds involve both great amounts of change and the urgenty to implement such change. Thus, two important topics to study under such conditions are the dynamic capabilities (commensurate with change) and the effects of time.

Thus, this dissertation tries to answer three general research questions:

(1) Are retrenchments dynamic and how dynamic is each of the two types?

(2) Under what conditions does an early CEO replacement influences turnaround success?

(3) Is there a mediation relationship of volume aggressiveness on the positive relationship between time of retrenchment and turnaround success?

In order to reply to these questions, three studies have been carried out. The first study focuses on examining the effect of asset retrenchment and cost retrenchment in a highly dynamic environment. This study has been published in "the Industrial and Corporate Change" journal. The second study analyzes the interactive effects of causes of decline, CEO tenure and CEO duality on the relationship between timing of CEO replacement and turnaround

success. Finally, the third study examines the mediation effect of volume aggressiveness on the positive effect of time aggressiveness on turnaround success.

We have listed below the hypotheses tested in our three studies. The first study deals with the dynamic capability content of retrenchment strategies:

H1: The more dynamic the environment is, the stronger the positive relationship between retrenchment as a set of dynamic activities and performance.

H2: The moderating effect of environmental dynamism on the relationship between retrenchment and performance will be stronger for asset retrenchment than for cost retrenchment.

Our second study defines and tests the concept of timing of CEO replacement, and assesses the interactive effects of causes of decline, tenure and duality on the relationship between timing of replacement and turnaround performance.

The following are the contributions of the hypotheses:

H3: In the presence of internal causes of decline, an early timing of CEO replacement will lead to turnaround success.

H4: In the presence of a long-tenured CEO, an early timing of CEO replacement will lead to turnaround success.

H5: In the presence of CEO duality, a late timing of CEO replacement will lead to turnaround success.

Finally, our third study analyzes the relationship between volume aggressiveness and time aggressiveness. Hypotheses as contribution are:

H6: Retrenchment volume aggressiveness will negatively affect performance in turnarounds.

H7: Retrenchment time aggressiveness will positively affect performance in turnarounds.

H8: Retrenchment volume aggressiveness mediates the relationship between retrenchment time aggressiveness and turnaround performance.

Our study presents 8 hypotheses whose aim is to reply to those three general questions. The three questions are linked as they are part of the broader concept of firm retrenchment in a decline context.

9. Structure

The structure of the dissertation is as follows. In Chapter 1, we include an abstract with respect to our three studies; in this chapter we also include an introduction, which summarizes the key aspects pertaining the dissertation. We present the three studies described in Chapters 2, 3 and 4. Chapter 2 presents the study entitled "**RESTRUCTURING IN DYNAMIC ENVIRONMENTS: A**

DYNAMIC CAPABILITIES PERSPECTIVE". The second study entitled **"TIMING OF CEO DISMISSAL UNDER CORPORATE CRISIS. A TEMPORAL APPROACH TO CEO SUCCESSION"** has been included Chapter 3 ". Finally, the study entitled "**THE MEDIATION OF VOLUME AGGRESSIVENESS ON TIME AGGRESSIVENESS IN RETRENCHMENT PROCESSES"** is part of Chapter 4. Each of these chapters includes different sections: introduction, hypotheses, methodology and conclusions (results, discussion and limitations). Chapter 5 completes the dissertation by summarizing a set of conclusions, contributions, limitations and future lines of investigation following this study. References have been included in each chapter.

SECOND CHAPTER

RESTRUCTURING IN DYNAMIC ENVIRONMENTS: A DYNAMIC CAPABILITIES PERSPECTIVE

1. Introduction

The dynamic capabilities research is still relatively new despite the number of published articles (Peteraf et al., 2013; Teece, 2012). The dynamic capabilities framework has been applied to many types of firms and it has been suggested that future research should identify new types of firms for which the concept could be useful (Barreto, 2010). Limited knowledge exists concerning the role of dynamic capabilities in organizational survival because few studies have focused on firms in decline (Danneels, 2011; Zúñiga-Vicente and Vicente-Lorente, 2006). Moreover, no existing studies address turnaround change capabilities and dynamic capabilities, which "remains an obvious candidate for future research" (Teece, 2012, p. 1397). Addressing turnarounds through a dynamic capabilities framework is important for two reasons. First, dynamic capabilities represent a framework used in change situations. Setting the boundaries for the framework is important to delineate its application. Given that turnarounds represent situations of extreme change, the evaluation of whether the framework is applicable to turnarounds represents the testing of the framework boundary conditions. Second, the literature is concerned that turnaround research has been mainly phenomenon-driven rather than theory-driven (Trahms et al., 2013). Finding links between turnaround and other theoretical frameworks is key for the advancement of research in the turnaround field.

During recent years, and spurred by the economic crisis, turnaround and survival as a research area has gained momentum (Boyne and Meier, 2009; Lim et al., 2013; McKinley et al., 2014; Ndofor et al., 2013; Schmitt and Raisch, 2013). However, research on the subject remains essential (McKinley et al., 2014), particularly research associated with retrenchment (Lim et al., 2013; Morrow et al., 2004). Retrenchment is the most common strategy for underperforming firms and the most crucial stage in the turnaround process (Lim et al., 2013; Morrow et al., 2004). Retrenchment research has evolved from initial studies that analyzed the effects of retrenchment (Barker III and Duhaime, 1997; Robbins and Pearce, 1992), to recent studies that emphasize the effects of contingency factors on turnaround, especially those exerted by the environment (Boyne and Meier, 2009; Lim et al., 2013; Ndofor et al., 2013).

The environment plays a critical role in firm survival because many of the causes of a firm´s decline are based either on environmental maladaptation or on environmental hostility (Arogyaswamy et al., 1995; Barker III and Duhaime, 1997; Cameron et al., 1987; Trahms et al., 2013). Recently, scholars have studied the environment in a turnaround context (Boyne and Meier, 2009; Lim et al., 2013; Morrow et al., 2004; Ndofor et al., 2013); however, the effects of retrenchment actions as the most important strategy in a turnaround within a dynamic environment remain unaddressed.

The environment is also critical to the dynamic capabilities framework (Davis et al., 2009; Dixon et al., 2010; Teece et al., 1997). The dynamic capabilities view represents an appropriate framework for the development of a theory of organizational change in turbulent environments (Dixon, Meyer, and Day 2010, Eisenhardt and Martin 2000, Teece, Pisano, and Shuen 1997). Scholars argue that dynamic capabilities are applicable not only to more stable environments (Zollo and Winter, 2002) but to rapidly and moderately changing environments (Eisenhardt and Martin, 2000). Our research uses the dynamic capabilities framework to analyze the impact of dynamism on organizational survival actions such as firm retrenchment. We use one of the most commonly applied dynamic capabilities model (Barrales-Molina et al., 2013; Peteraf et al., 2013), which is proposed by Teece (1997) and Teece and Shuen (2007) to address the following two questions: 1) In what way do asset and cost retrenchment affect a firm's performance under conditions of high dynamism? 2) Do firms using asset retrenchment, the retrenchment strategy most linked to dynamic capabilities, perform better under dynamic environments than firms using cost retrenchment? In summary, we study the relationship between retrenchment, representing extreme firm change, and dynamism through a lens – the dynamic capabilities framework – suitable for the study of both.

Our research builds on the dynamic capabilities framework and develops arguments for the effects of retrenchment in an environmentally dynamic

setting. Although the concept of retrenchment has been widely debated, there is considerable ambiguity concerning its strategic nature. Retrenchment is often characterized as operational actions. We argue and theorize, consistent with other scholars (Arogyaswamy et al., 1995; Barker III and Duhaime, 1997), that retrenchment is a stage in which firms not only implement operational actions but strategic actions. Strategic action is recognized as a dynamic capability (Bowman and Ambrosini, 2003; Eisenhardt and Martin, 2000; Katkalo et al., 2010; Moliterno and Wiersema, 2007). Next, we theorize the nature of retrenchment as a cluster of dynamic capabilities recognized by literature and identify them beyond strategic actions. In arguing the dynamic capability nature of retrenchment, we use the sensing-seizing-transforming framework by Teece (2007). We hypothesize first that dynamism has a positive effect on the relationship between retrenchment and performance. Second, we hypothesize that the effects of dynamism depend on the chosen retrenchment strategy. We argue that the effects will be lessened in the case of cost retrenchment compared to asset retrenchment because the nature of cost retrenchment is less related to dynamic capabilities (Morrow et al., 2004).

We test the arguments on a group of Spanish firms involved in asset or cost retrenchment between the years 2000 and 2005 and the effects on performance two years later. Our dynamic panel data analysis allows us to conclude that both types of retrenchment have a positive effect on firm

performance in dynamic conditions. However, asset retrenchment has a greater impact than cost retrenchment. Our study enhances knowledge concerning the effects of dynamism and retrenchment actions on firm performance. However, most importantly, our primary contribution is to articulate the nature of retrenchment actions and turnarounds by building on the dynamic capabilities framework (Danneels, 2011; Teece, 2012). Additionally, this study identifies new types of firms for which dynamic capabilities can be of use (Barreto, 2010).

2. Theoretical background

2.1 Clarifying the nature of retrenchment: operating actions and strategic actions

First, we argue that firms affect operating actions as well as strategic actions during retrenchment. The discussion is significantly important in order to categorize retrenchment correctly as a set of dynamic capabilities.

A turnaround is achieved when a firm facing life-threatening performance declines over a period, succeeds in reversing the performance decline, and achieves sustained profitability (Barker III and Duhaime, 1997). The literature has established the distinction between two types of actions to achieve a successful turnaround. These are "operating" and "strategic" actions

(Bibeault, 1982; Ndofor et al., 2013; Schendel et al., 1976). Operating actions address efficiency achievements and seek short-term cost reductions (Ndofor et al., 2013; Trahms et al., 2013). Strategic actions address adjustments in a firm´s domain or the way in which the firm competes within those domains (Ndofor et al., 2013) and are oriented towards sustained long-term profitability (Barker III and Duhaime, 1997).

The turnaround model proposed by Robbins and Pearce (1992) has been accepted mostly in the literature, although it has some critics (Arogyaswamy et al., 1995; Barker and Mone, 1994; Pearce and Robbins, 1994). The model distinguishes between retrenchment and recovery as the two distinct stages in a turnaround. During retrenchment, firms execute actions to ensure survival and the achievement of positive cash flow (Robbins and Pearce, 1992). Conversely, during recovery, firms shift objectives to growth and development (Robbins and Pearce, 1992).

The main source of confusion in the turnaround literature that prevents research progress is the role of strategic action in the turnaround stages (Arogyaswamy et al., 1995; Barker III and Duhaime, 1997). Theorists have adopted two perspectives on this issue. First, some theorists categorize retrenchment as operating actions rather than strategic actions (Ndofor et al., 2013; Schmitt and Raisch, 2013). This perspective defines retrenchment as the elimination of assets and cost reductions as a means of increasing

firm efficiency (Dewitt, 1998; Hambrick and Schecter, 1983; Schmitt and Raisch, 2013) and posits that strategic actions do not have a relevant role in the retrenchment stage.

Second, other theorists define retrenchment as activities taken in lieu of not only of efficiency (operating actions), but also, and most importantly, the refocus of strategy (Arogyaswamy et al., 1995; Barker III and Duhaime, 1997; Boyne and Meier, 2009; Dawley et al., 2002; Johnson, 1996; Pearce II and Robbins, 2008). From this perspective, retrenchment is not confined to operating actions but also entails strategic actions. Retrenchment is, therefore, defined as a reduction in the size and scope of a business (Boyne and Meier, 2009). This perspective considers strategic actions such as exiting difficult markets, deleting unprofitable product lines, divesting lines of business that do not fit the core, discontinuing unpromising products, and changing the mix of products and services controlled by a strategic unit as part of retrenchment (Barker III and Duhaime, 1997; Boyne and Meier, 2009; Pearce II and Robbins, 2008; Sudarsanam and Lai, 2001). Therefore, from this perspective, firms *do* engage in strategic actions during retrenchment.

Actions taken during retrenchment are unanimously considered operational in nature; however, the specific content of those actions is also strategic. Nonetheless, consistent with the definition of retrenchment (Barker III and Duhaime, 1997; Bibeault, 1982; Robbins and Pearce, 1992), the type of

strategic action taken during this stage is survival and positive cash flow-oriented strategic action rather than growth-oriented strategic action. A turnaround involves several years of declining profitability and a final year of straight loss (Bruton et al., 2003; Morrow et al., 2004). Firms experiencing losses or lack of cash find it difficult to implement growth-oriented strategic action. A strategic approach based on investments would further deteriorate the firm´s position. Only when the company can generate positive cash flow is growth-oriented strategic action an option (Platt, 2004). This situation occurs after the retrenchment stage and during the recovery stage (Robbins and Pearce, 1992). However, as Porter (1996: p. 18) clarifies "strategy renders choices about what not to do as important as choices about what to do." Those retrenchment-related decisions and actions are purely strategic because they represent adjustments in a firm´s domain (Ndofor et al., 2013) and long-term strategic orientation is necessary (Dewitt, 1998; Lim et al., 2013).

The next subsection describes retrenchment as a process by which firms, through sensing, shaping, and reconfiguration, readapt to the environment after years of neglect to respond to fast-changing markets. Retrenchment involves a set of competencies that have been categorized as dynamic capabilities by research.

2.2 Retrenchment as a set of dynamic capabilities

Based on the dynamic capabilities framework, this section argues that firms engage in three clusters of activities during retrenchment within which dynamic capabilities fall (Teece, 2007, 2012; Teece et al., 1997). During the retrenchment phase, firms (1) sense opportunities and threats, (2) seize resources, and (3) transform resources. We discuss the relationship of retrenchment and dynamic capabilities.

An ordinary capability allows firms to deploy resources to earn a living in the present (Collis, 1994; Schilke, 2014). A dynamic capability allows an organization to purposefully create, extend, or modify its resource base (Helfat et al., 2007). Research identifies the types of firms for which the concept of dynamic capabilities is most useful and there is abundant research on such firms (Barreto, 2010). However, limited works have directly linked turnarounds with dynamic capabilities (Danneels, 2011; Zúñiga-Vicente and Vicente-Lorente, 2006), which remains a strong candidate for research (Teece, 2012). Given that dynamic capabilities may be rooted in certain change routines and turnaround management is composed of transformational capabilities, the question arises as to whether turnaround strategies involve dynamic capabilities. Dynamic capabilities fall under three clusters of activities: sensing, seizing, and transforming (Teece, 2007,

2012). Next, we discuss how each of the three groups of activities operates during retrenchment and the specific dynamic capabilities involved.

Sensing. Sensing involves the analysis of the environmental threats and opportunities (Teece 2012, Teece 2007). During sensing, firms scan, search, and explore factors such as the evolution of industries, markets, competitor and supplier response, and latent demand (Teece 2007). The decision to initiate a turnaround is made, and a preliminary analysis of symptoms and causes is conducted before the turnaround is initiated (Bibeault, 1982; Slatter, 1984). Although this preliminary diagnostic constitutes sensing, it is not part of retrenchment because retrenchment involves deep analysis followed by execution rather than preliminary analysis without action.

During retrenchment, the turnaround has already been initiated and the firm is actively analyzing threats and opportunities pursuant to the survival of the firm. At this stage, firms sense by seeking internal firm-related and external information. Sensing depends on the organizational extant knowledge and learning capacities (Teece, 2007). Several difficulties form a particularly intense and complex sensing process during retrenchment (Zimmerman, 1991).

First, information asymmetries between leadership and the firm are evident during retrenchment. Turnaround leadership tends to be new because the firm boards in turnaround situations are under pressure to make prompt

leadership changes (Khurana, 2002; Zhang, 2008). Additionally, talented incumbents often voluntarily depart because of fatigue or weariness concerning their prospects (Semadeni et al., 2008). Thus, leadership lacks firm-specific information and, possibly, industry-specific data. However, firm survival depends on an effective and rapid sensing process.

Second, distressed firms operate in situations of scarce and dwindling organizational resources (Trahms et al., 2013). a) The lack of operational resources restricts the information the firm receives. Firm decline erodes operational resources, thus, poorly performing firms are likely to possess fewer resources available for scanning (Lant et al., 1992). b) The information the company possesses is often inaccurate (Zimmerman, 1991) because, during the decline, information processing is deficient (Arogyaswamy et al., 1995; Hambrick and D´Aveni, 1992). Thus, the stock of knowledge owned by the firm can be faulty. c) Time constraints force firms to make decisions based on imperfect information. Distressed firms are on the brink of collapse; thus, the pressure to act quickly is substantial, even if management lacks the information necessary to make correct decisions. The firm is biased towards action (Zimmerman, 1986) and leadership may expedite decisions based on imperfect information. The process of sensing is, therefore, undermined. d) Stakeholder burnout degrades the information gathering process. Relationships with stakeholders can deteriorate in the period prior to the turnaround. Tension arises with banks, unions, and

suppliers because the firm struggles to meet commitments. When retrenchment is initiated, some stakeholders will be unwilling to collaborate with the troubled firm. The amount, quality, and number of information sources decreases (Hermann, 1963). However, information from stakeholders is important for the survival of the firm (Bibeault, 1982; Pajunen, 2006; Pennings et al., 1998).

Third, during sensing, information is filtered and delivered to those capable of making sense of it (Teece, 2007). The centralization of tasks around a core group of individuals is typical during retrenchment to facilitate faster decision-making that avoids firm collapse (Bibeault, 1982; Cater III and Schwab, 2008; Schmitt and Raisch, 2013). However, this centralization restricts further organizational capacity to sense because fewer individuals are involved in the sensing process (Latham and Braun, 2009; McKinley et al., 2014).

To cope with these three difficulties – new management that lacks knowledge, a lack of knowledge-generating resources, and faulty information – it is critical that distressed firms engage in learning (Lohrke et al., 2012; Zimmerman, 1986, 1991). Additionally, given that distressed firms are time constrained because of the imminent threat of collapse, the ability to learn is important with respect to the speed of reconfiguration (Sapienza et al., 2006). Retrenching organizations use two learning mechanisms

already discussed in the restructuring literature (Bergh and Lim, 2008). First, a firm´s absorptive capacity is used during turnarounds (Lohrke et al., 2012), restructuring (Bergh and Lim, 2008), or intense change (Elliott and Smith, 2006). Absorptive capacity is the ability to acquire, assimilate, and exploit information for commercial ends (Cohen and Levinthal, 1990; Sapienza et al., 2006). Retrenching firms deploy their absorptive capacity by using prior knowledge to assimilate, recall, and use new knowledge (Cohen and Levinthal, 1990). The absorptive capacity mechanism is more effective during failure than during success (Madsen and Desai, 2010). Success leads to stability in organizational knowledge. In contrast, failure motivates firms to discard the old models and to search for models that better reflect reality. This search process provides firms with guidance on how to access, evaluate, and utilize knowledge. During decline, firms use this search process, which is appropriate for the retrenchment stage. A caveat for this process is that stored information can be faulty, and mechanisms to unlearn may be required (Martin de Hollan and Phillips, 2004; Nystrom and Starbuck, 1984). Second, retrenchment occurs in time pressure, real-time settings where planning models play a smaller role. One form of learning used in this type of environment is improvisation. Although improvisation is considered a type of short-term learning (Bergh and Lim, 2008; Crossan et al., 2005; Eisenhardt and Brown, 1995; Miner et al., 2001), it is not considered a dynamic capability (Winter, 2003). The lack of time and resources induces a

rapid and uncertain decision-making process, which is apt for improvisation (Bergh and Lim, 2008; Zahra et al., 2006). Managers are forced to draw from stored knowledge from the organizational memory (Bergh and Lim, 2008; Walsh and Rivera, 1991). Improvisation accelerates the amount and speed of change of firm retrenchment (Zahra et al., 2006).

In summary, during retrenchment, organizations make use of several sensing-related capabilities, which the literature lists as dynamic capabilities. These are analytical methodologies (Teece, 2012), absorptive capacity (Winter, 2003; Zahra et al., 2006), and knowledge transfer capabilities (Eisenhardt and Martin, 2000). During retrenchment, firms also use other sensing-related capabilities not considered dynamic, such as improvisation (Winter, 2003).

Seizing. Once the threats and opportunities have been averted, leadership must choose resources and organizational infrastructure and mobilize the resources to align the firm to the environment (Helfat et al., 2007; Katkalo et al., 2010). Declining firms underperform over the years because of, among other reasons, firm maladaptation or environmental hostility (Arogyaswamy et al., 1995; Cameron et al., 1987; Trahms et al., 2013). Seizing corresponds to a group of activities that address the following two general causes of decline. 1) The capability to evaluate and prescribe changes to asset

configurations (Katkalo et al., 2010; Teece, 2012) and 2) the mobilization of resources to address threats and opportunities to capture value (Katkalo et al., 2010; Teece, 2012).

First, with respect to the evaluation and choice of resources, seizing involves the when, where, and how much of the reconfiguration process and the selection and creation of a business model (Teece, 2007). This activity implies an adjustment in the firm´s domain, which, as argued earlier, represents an activity component of retrenchment. Theorists have acknowledged that these activities are also dynamic capabilities-related (Bowman and Ambrosini, 2003; Katkalo et al., 2010; Moliterno and Wiersema, 2007). In evaluating resources to change asset configurations, retrenching firms lack resources to invest because the decline has eroded the asset base. Thus, the orchestration of assets – identification, prioritization, and the selection of projects (Teece, 2012) – is linked to asset reconfiguration (Teece, 2007). Reconfiguration describes the methods used by firms to modify existing capabilities (Lavie, 2006) and is a core element of dynamic capabilities (Teece, 2007). By reconfiguring, the firm tries to escape unfavorable path dependencies, inertia, and other rigidities (Helfat et al., 2007; Teece, 2007). Lavie (2006) describes three reconfiguration mechanisms: substitution, evolution, and transformation. During retrenchment, firms are more likely to pursue asset reconfigurations using a substitution or transformation mechanism. Because successful evolution

requires substantial time (Lavie, 2006), it is less applicable during the time-constrained retrenchment stage. As argued, during retrenchment, firms decide which activities, market segments, and products the company will stop producing to survive (Barker III and Duhaime, 1997). Substitution and transformation are linked to retrenchment.

Second, with respect to resource mobilization, retrenchment requires change capabilities to execute asset reconfigurations. At the core of dynamic capabilities is the dynamic ability to change or reconfigure operating capabilities (Winter, 2003; Zahra et al., 2006; Zollo and Winter, 2002). The required change capacities may exist within the organization; however, it is impossible to retain full transformational capacities within the firm. Consequently, these capacities may be external to the organization (Teece, 2012). Transformation capacity that has been absent can be provided by enhancing and reconfiguring routines and resources and combining and protecting resources (Teece, 2007). A successful turnaround depends on the efficient and effective management of the retrenchment process (Bruton et al., 2003; Dewitt, 1998). The role of leadership is integral to successful turnarounds because dynamic capabilities require superior management entrepreneurial and leadership skills to effect aggressive decisions concerning what and where to retrench (Teece, 2012).

In summary, seizing at the retrenchment stage involves dynamic capabilities that have been recognized by the literature, such as strategic decision-making capabilities (Bowman and Ambrosini, 2003; Eisenhardt and Martin, 2000; Katkalo et al., 2010; Moliterno and Wiersema, 2007; Slater et al., 2006), product, production process, scale of markets served, change capabilities (Winter, 2003), operations alteration capabilities (Helfat and Winter, 2011; Zahra et al., 2006), new business processes implementation capabilities (Drnevich and Kriauciunas, 2011), capabilities to change ways of doing business (Drnevich and Kriauciunas, 2011; Teece, 2007), renewal capabilities (Shamsie et al., 2009), and resource orchestration capabilities (Katkalo et al., 2010).

Transforming. Transforming entails the continuous renewal of the firm to sustain competitive advantage (Katkalo et al., 2010; Teece, 2007, 2012). It refers to the reconfiguration of assets and structures to maintain competitiveness, given that firms have a continuous need to modify product offering, business models, enterprise boundaries, and organizational structures (Teece, 2007). Continuous renewal softens the rigidities derived over time from asset accumulation, standard operating procedures, and insider misappropriation of rent streams (Teece, 2014b).

Transforming is related more to the second turnaround stage, recovery[1]. Recovery is the stage in which competitive advantage is pursued. However, retrenchment is relevant to transforming, as during this turnaround stage, the firm prepares for transforming by modifying organizational traits. The result of retrenchment is an organization that is better able to achieve continuous renewal.

Retrenchment involves the reduction of organizational assets and costs. The resulting firm will be a smaller organization. By reducing the size, the firm reduces its complexity, reduces the need for organization and control, and becomes less structurally mechanistic (Sutton and D´Aunno, 1989). Less structurally mechanistic firms are more flexible and thus, are more apt to adapt to a changing environments (Davis et al., 2009). In addition, retrenchment devolves the organization to financial stability and the firm will become cash flow positive (Pearce II and Robbins, 1993; Robbins and Pearce, 1992). Beyond those internal sources of financing, the improvement of the financial health will provide the organization with access to external finance. Thus, the new organization will be able to become involved in continuous renewal projects requiring financial support. In summary, after retrenchment, the declining organization will possess traits that allow it to

[1] In line with Arogyaswamy et al. (1995), we do not intend to suggest that the retrenchment and recovery stages should necessarily be sequentially addressed. Our opinion is, they could be simultaneously dealt with, as recent research has suggested (Schmitt and Raisch, 2013) . Similarly, Teece (2007) sensing-seizing-transforming model does not seem to be conceived as a sequential one. The author has suggested in numerous instances how the model is often simultaneously applied (Teece, 2007, 2014a, 2014b).

achieve a better fit between the strategy, structure, and the processes. Hence, retrenchment is preparatory for the transformation of a firm, which prepares the firm for continuous renewal. Specifically, the retrenched firm will be better able to meet the four microfoundations of transforming described in the model of Teece (2007).

We describe next how the retrenched organization is better able to cope with the microfoundations of transforming. First, with regard to decentralization and near decomposability, during retrenchment, the organization needs to become more centralized in order to gain tighter control because survival is at stake (D´Aveni, 1989; Schmitt and Raisch, 2013; Whetten, 1987). Subsequently, retrenchment reduces personnel and delayers the organization to produce a more agile, simplified, and smaller firm that is better able to communicate. Delayering and simplification will help the organization to achieve the decentralization and near decomposability necessary for transformation (Teece, 2007). A more agile organization will be able to speed up the decision-making process. Faster decision making allows firms to adopt faster new products, processes, business models, and economies of learning faster (Baum and Wally, 2003; Eisenhardt, 1989). Second, with regard to managing cospecialization (Teece, 2007), cospecialized assets are a class of complementary assets whose value depends on their joint use with other assets. Asset cospecialization allows organizational renewal in turnaround processes

(Ruiz-Navarro, 1998). Cospecialization requires investment or access to external resources (Teece, 2007). Retrenchment enables the firm to devolve to financial stability and positive cash flow (Pearce II and Robbins, 1993; Robbins and Pearce, 1992). The retrenched firm will be more able to obtain financing to build or buy cospecialized assets. Third, with regard to learning and knowledge management, the retrenched organization is a more simplified less complex organization. These traits will improve organizational learning and knowledge management. In addition, retrenched organizations are likely to reduce routine learning and groupthink, and open opportunities for the creation of new network connections (Fisher and White, 2000). Finally, with regard to corporate governance, through retrenchment, firms replace the top management team demonstrating weak sensing, seizing, and transforming capabilities (Teece, 2007). Retrenchment provides the organization with a team that will help the organization achieve continuous renewal.

An issue critical to dynamic capabilities is the need for repeated or patterned behavior that renders activities a capability (Helfat and Winter, 2011; Helfat et al., 2007). There are two arguments that lead to the consideration of retrenchment strategies as routines. First, literature has supported the theory that some of the measures regularly taken during asset retrenchment and cost retrenchment, such as sell-offs or spin-offs, although occasionally practiced, are practiced by firms with sufficient

frequency to be considered a capability rather than an ad hoc activity (Bergh and Lim, 2008). Firm decline – and thus retrenchment – is a normal firm process (Bergh and Lim, 2008). Time spans between periods of decline can be long and the degree of retrenchment intensity can be less than that of an actual turnaround. However, because decline is an event that repeats itself in firms, retrenchment is a routine activity. Third, asset and cost retrenchment are clusters of dynamic capabilities. Even if a firm does not embark in a turnaround every year, those capabilities that compose asset and cost retrenchment – analytical capabilities, absorptive capacity, knowledge transfer capabilities, strategic decision-making capabilities, and resource orchestration capabilities – are activities routinely practiced by firms.

In summary, retrenchment involves sensing, seizing and transforming to address and shape a rapidly changing business environment (Danneels, 2011; Teece et al., 1997). By using the dynamic capabilities framework proposed by Teece (2007), we have described and detailed the specific dynamic capabilities used during the retrenchment stage of a turnaround.

3. Hypoheses

This section first hypothesizes that the more dynamic the environment, the greater the (positive) impact that retrenchment, as a set of dynamic

capabilities, has on firm performance. Second, we hypothesize that the extent of the environmental dynamism´s impact on performance depends on the type of retrenchment strategy selected – asset retrenchment or cost retrenchment. Asset retrenchment is more dynamic capability-oriented than cost retrenchment; thus, we argue that, under dynamic environments, firm performance of asset retrenchment will be superior to that of cost retrenchment.

Abundant literature has supported that the environment affects organizations (Baum et al., 2001; Lumpkin and Dess, 1996). Dynamism is defined as the level of turbulence or instability facing an environment (Boyd, 1990). Dynamism is an environmental condition and there is substantial evidence of its effects on firm performance (Ensley et al., 2006; Priem et al., 1995; Wang and Li, 2008; Wiklund and Shepherd, 2003). Similarly, the most recent research on turnaround provides evidence of environmental and, more particularly, dynamism effects on the processes and outcomes of declining firms (Boyne and Meier, 2009; Lim et al., 2013; Morrow et al., 2004; Ndofor et al., 2013).

A dynamic environment may trigger a firm to change and to use dynamic capabilities. Dynamism has two effects on firms. First, dynamism raises the awareness of the need to change and, second, it drives organizations to effect change.

Dynamism can facilitate firm awareness of the need to change. An unusual level of environmental dynamism, or a level that differs from management expectations, attracts the attention of the executive team (Daft et al., 1988). The environment alerts management of the inadequacies in proprietary ordinary capabilities. Management will, upon a surge in dynamism, start to consider the need to use proprietary dynamic capabilities to reconfigure ordinary capabilities (Zahra et al., 2006). Management awareness of the need to change is also raised by the speed of firm decline. A slow firm decline results in less awareness of the situation by management (Barr et al., 1992). Conversely, awareness of the need to change is more salient in firms subject to rapid decline. Hence, firm awareness of the need to change is raised by both, a dynamic environment and a high level of distress.

Even if the declining firm is aware of the need to change, research suggest that poor performance is not sufficient to move towards change (Barker III et al., 2001). The firm will not act until the level of stress peaks. This happens when poor results are combined with a precipitating event. Additionally, Barker and Patterson (2001) suggest that this precipitating event can be caused by an environmental factor (Barker III, Patterson Jr., and Mueller 2001). High dynamism could be the trigger for the initiation of retrenchment – composed of a set of dynamic capabilities – as the first stage in a

turnaround. Thus, awareness of the need to change can be initiated by the joint action of both environmental dynamism and a high level of distress.

Second, once dynamism has raised the awareness of the need to change and a precipitating event has triggered the initiation of retrenchment, firms will retrench by deploying the dynamic capabilities retrenchment represents. A dynamic environment is one of the precedents of organizational and strategic change because it stimulates managerial action. Managers, under such conditions, are more likely to invoke change (Gordon et al., 2000). Similarly, in high velocity industries – an industry characterized by rapid and unpredictable changes – the speed of organizational response and change is faster than in low velocity industries (Nadkarni and Barr, 2008). In the context of declining firms, the lower the level of satisfaction with past performance, the higher the incentive to seek change (Audia et al., 2000). Distressed firms have a higher incentive to change. Research on underperforming firms confirms the recognition of the need to retrench (Datta et al., 2010; Filatotchev et al., 2000) or embark on strategic change (Barker III and Duhaime, 1997; Haveman, 1992; Ndofor et al., 2013).

Not only does the need to change under dynamic environments stimulate firms to use dynamic capabilities, but the opportunity to use those capabilities provides firms with an incentive to use them. Dynamic

capabilities have been viewed as strategic options (Kogut and Zander, 1996). Under this view, firms have the option to reshape the resource base to improve a decaying performance when environmental opportunity allows. When environmental dynamism is high, there are many opportunities to exercise dynamic capabilities effectively, and the potential for success is high (Drnevich and Kriauciunas, 2011; Schilke, 2014). Therefore, environmental dynamism increases the development and use of dynamic capabilities. In summary, a dynamic environment raises the awareness of the need to change and the need to make use of in-house dynamic capabilities. The need to change is derived from a perception of the need to change as both an obligation and an opportunity. This process is more salient for distressed firms.

As noted earlier, retrenchment can be decoupled in a set of dynamic capabilities pertaining to sensing and seizing as two clusters of dynamic capability activities. Scholars have argued and found that the potential gains from dynamic capabilities are greater in dynamic environments (Drnevich and Kriauciunas, 2011; Schilke, 2014; Zahra et al., 2006) because dynamic capabilities allow the firm to adjust to the environment (Eisenhardt, 1989; Helfat et al., 2007). Thus, we propose the following hypothesis:

Hypothesis 1: The more dynamic the environment is, the stronger the positive relationship between retrenchment as a set *of dynamic activities and performance.*

We argue next that the extent to which environmental dynamism impacts firm performance depends on the type of retrenchment strategy of choice.

As discussed in section 2.2, dynamic capabilities are the processes by which a firm configures and reconfigures its portfolio of strategically important resources (Eisenhardt and Martin, 2000; Helfat, 1997; Lavie, 2006; Teece et al., 1997). The dynamic capability literature describes how reconfiguration operates in declining firms. First, there is abundant dynamic capability literature that describes how the activities at the core of retrenchment - asset reductions (Danneels, 2011), cost cutting (Helfat et al., 2007), layoffs (Danneels, 2011; Helfat et al., 2007; Lavie, 2006), and restructuring (Helfat et al., 2007; Lavie, 2006; Zollo and Winter, 2002) - are used by declining firms to reconfigure their resource bases. Second, authors categorize these activities as part of the modes of dynamic capability reconfiguration. Releasing is one of the four modes by which firms can reconfigure their dynamic capabilities (Danneels, 2011; Eisenhardt and Martin, 2000). Releasing is defined as the "shedding or dropping of resources" (Danneels, 2011: p. 20). Releasing alters those capabilities in the maturity stage. At this

stage of the capability lifecycle, the releasing reconfiguration process may branch capabilities into retirement (terminatation) or retrenchment (trimming) (Helfat and Peteraf, 2003: p. 1000). Similarly, Lavie (2006) finds three mechanisms for capability reconfiguration. Substitution and transformation are the two most relevant mechanisms during retrenchment, as they include both asset reductions and cost reductions.

We concur with the literature that retrenchment, as a capability reconfiguration mechanism, can be part of the dynamic capabilities of a firm. However, not every retrenchment activity is related to dynamic capability. Dynamic capabilities are directed towards strategic change (Barreto, 2010; Helfat, 1997; Helfat et al., 2007). They provide a singular focus on strategic change, rather than organizational change (Helfat and Martin, 2014). Thus, strategizing is at the core of dynamic capabilities (Teece, 2012). Strategizing involves several capabilities, such as strategy formation, strategic decision making, and strategy implementation, which have been considered persistently by the authors as dynamic, given their superior role in facilitating strategic fit to the environment[2] (Eisenhardt and Martin, 2000; Katkalo et al., 2010; Kay, 2010; Moliterno and Wiersema, 2007; Slater et al., 2006; Teece, 2012; Zollo and Winter, 2002). By contrast, ordinary capabilities facilitate organizational efficiency and effectiveness (Dixon et al., 2010; Zahra et al., 2006) and are related to the operational activity of the firm

[2] Teece (2014a) has assimilated the three clusters of dynamic capabilities of his model (sensing-seizing-transforming) with the three elements of the definition of strategy by Rumelt (2011) .

(Hine et al., 2013; Zollo and Winter, 2002). Ordinary capabilities allow a firm to earn a living in the present and to continue current operations (Collis, 1994; Drnevich and Kriauciunas, 2011; Winter, 2003). Thus, they are characterized by maintaining the status quo by performing an activity on a continuous basis (Helfat and Peteraf, 2003). "Dynamic capabilities are 'strategic' and distinct from ordinary capabilities" which are operational (Teece, 2012: p. 1396). When a firm implements retrenchment, it deploys an array of capabilities. Some of them are strategic and some are operational. Those retrenchment capabilities related to a firm´s strategy can be considered dynamic capability. By contrast, retrenchment capabilities related to the operational or efficiency improvement of the firm are ordinary.

Research identifies two distinct types of retrenchment: asset retrenchment and cost retrenchment. Asset retrenchment is defined as the net reduction of assets, whereas cost retrenchment indicates the net reduction of total costs (Lim et al., 2013; Morrow et al., 2004). Few studies have researched the differentiated effects of asset and cost retrenchment (Lim et al., 2013; Morrow et al., 2004). However, asset and cost retrenchment possess different characteristics as shown in the literature (Lim et al., 2013; Morrow et al., 2004). As argued earlier, both asset and cost retrenchment are used to change the strategy of a firm (Dewitt, 1998). Thus, they both possess a dynamic capability nature. However, the literature has pointed out how

cost retrenchment is more operational while asset retrenchment is more strategic[3] (Morrow Jr. et al., 2007). Authors have conceded how changes pursued through cost retrenchment are more tactical and less strategic (Barker III and Duhaime, 1997; Morrow Jr. et al., 2004; Robbins and Pearce, 1992), and thus, they are less related to dynamic capabilities than those pursued through asset retrenchment.

Capabilities create value by conferring upon an organization the ability to perform a function (Helfat et al., 2007). A function is a group of actions with an objective. The literature has described three functions to retrenchment (Arogyaswamy et al., 1995; Barker and Mone, 1994; Bibeault, 1982; Dewitt, 1998; Morrow Jr. et al., 2007; Pearce II and Robbins, 1993). These functions are a) cash flow generation b) strategic change, and c) operational improvement. In the next subsections, we argue two topics leading to our hypothesis. First, we describe each function, whether their nature is more operational or strategic, and thereby, which function is related more to ordinary or dynamic capability. Second, we elaborate which type of retrenchment is more suited to meet each function and which type of retrenchment is thereby related more to ordinary or dynamic capability.

Function 1: Retrenchment as a means to generate liquidity. A turnaround is generally triggered by a cash crisis (Bibeault, 1982; Shein, 2013). A cash crisis

[3] A firm´s extent (degree) of strategic change can vary (Barker III and Duhaime, 1997). In turnarounds, different activities have the power to produce different degrees of strategic change. Some activities will then be more "strategic" than others.

is the most urgent issue to be tackled during the initial stages of a turnaround given the high risk to firm survival it represents. Declining firms struggle to find investor financing given that the latter are driven off by the high lending risks (Hambrick and D´Aveni, 1988; Trahms et al., 2013). Thus, firms need to resort to internal sources of liquidity through cash flow generation. Cash flow is generated to support the continuation of the firm, that is, to fund the current operations of the cash-strapped firm. Given ordinary capabilities are those that enable a firm to perform its current operations efficiently (Teece, 2012), the generation of cash flow to support current operations is part of the firm ordinary capabilities rather than the dynamic capabilities.

Retrenchment is the first stage in a turnaround and one of its critical functions is to respond to the need to "stop the bleeding" and generate positive cash flow before the firm fails (Arogyaswamy et al., 1995; Pearce II and Robbins, 1993; Robbins and Pearce, 1992). Cash flow generation measures need to be introduced in an expedited manner due to the high risk of failure (Bibeault, 1982; Slatter et al., 2006). Declining firms use cost retrenchment, rather than asset retrenchment, as the set of measures most fitted to deal with cash problems. The reason is cost retrenchment is the most expedited alternative a firm has to generate excess cash, and return to positive cash flow, thus avoiding firm failure (Robbins and Pearce, 1992; Schoenberg et al., 2013). In addition, the implementation of cost

retrenchment measures requires less capital, which is critical to be conserved in such a situation of cash starvation. As an alternative to cost retrenchment, firms can resort to asset retrenchment to generate cash flow. Consequently, asset retrenchment involves the collection of cash through the disposal of the firm assets, such as closing plants, divesting equity (sell offs, spin offs, and carve-outs), and reducing stocks of property, equipment, and inventory (Lim et al., 2013; Morrow et al., 2004). Research has found numerous difficulties in the process of asset divestments by declining firms. The difficulties relate to the need for creditor discretion of the disposal, exit barriers, industry liquidity problems, low resale prices derived from fire sale, and asset specificity (Filatotchev and Toms, 2006; Harrigan, 1981). All these difficulties make asset retrenchment a complex and very time-consuming process. For these reasons, asset retrenchment becomes the least used retrenchment alternative to generate cash flow given cost retrenchment is quicker, less capital consuming, and thereby more effective than asset retrenchment.

In summary, a critical function of retrenchment is the generation of positive cash flow to avoid firm collapse. Cash flow is then generated to support current operations. Those capabilities involved in the support of current operations are ordinary and not dynamic (Teece, 2012; Winter, 2003), and hence, the function of cash flow generation is related to ordinary capability. Declining firms can improve cash flow generation through asset

or cost retrenchment. Cash flow can be generated more optimally through cost retrenchment than through asset retrenchment. Cost retrenchment allows a firm to generate cash flow faster and with a lower use of capital. Declining firms will use asset retrenchment only as a second-best option to cost retrenchment oriented to generate cash. Cost retrenchment is more suited to accomplish this ordinary capability-related function than asset retrenchment.

Function 2: Retrenchment as a mean to change a firm's strategy. We know that "the average turnaround involves significant" strategic change (Barker III and Duhaime, 1997: p. 33). The change of a firm strategy is critical to turnaround success (Zúñiga-Vicente and Vicente-Lorente, 2006). Research on strategic content is concerned with two main matters: the scope of the firm and competition within individual markets[4] (Helfat et al., 2007; Montgomery et al., 1989). We discuss each of these two matters in the context of declining firms and retrenchment.

However, it is important to stress that turnaround literature clearly indicates that the most important strategic content element during retrenchment is the delineation of firm scope (Boyne and Meier, 2009; Dawley et al., 2002; Sirmon et al., 2011).

[4] Turnaround literature also discusses strategic content. Barker III and Duhaime (1997) concur these two elements are also the relevant ones to firms under turnaround.

First, through strategy, a firm delineates the firm scope. The choice of scope ("breadth") is a key task of the resource orchestration for declining firms (Sirmon et al., 2011: p. 1392). Delineating the firm scope rather than being important for strategy may constitute the very essence of strategy for many firms (Bingham et al., 2007). Delineating the firm scope is part of the strategy of the firm and part of the dynamic capabilities of a firm (Helfat et al., 2007; Sirmon et al., 2011; Teece, 2007). Delineating the firm scope is the principal strategic content of retrenchment (Boyne and Meier, 2009; Dawley et al., 2002). During the early stages of decline, the delineation of a firm boundaries consists of narrowing those boundaries rather than broadening them. Resource orchestration of declining firms will primarily require resource divestments (Sirmon et al., 2011), especially during the early stages of decline. Firms then refocus the scope of the firm to return to profitable core businesses rather than diversifying away from it (Bibeault, 1982; Dawley et al., 2002; Johnson, 1996; Robbins and Pearce, 1992). There are two reasons why declining firms resort to refocusing for boundary delineation. First, diversifying requires the availability of financing and declining firms lack financing or access to it (Gilson, 1990; Hambrick and D´Aveni, 1988). Refocusing is less capital intensive, and hence, is more feasible for cash strapped firms. Second, evidence shows that in situations of decline, to refocus rather than to diversify is a better alternative given that the risks of diversification may be too high (Anand and Singh, 1997; Blatz et al., 2006;

Helfat and Eisenhardt, 2004). Firms avoid further risks in a situation in which risks abound, such as decline. Then, declining firms will use retrenchment to delineate a firm´s scope and refocus the firm towards the profitable core. Danneels (2008) provides a good example of refocusing through retrenchment involving dynamic capabilities. Smith Corona, the typewriter firm, retrenched firm assets by divesting its manufacturing facilities because of decreasing demand for the product. The divestment allowed the firm to obtain cash and to concentrate on the typewriter ribbons, a high-margin product for the firm.

Declining firms adjust their scope through retrenchment. The choice of scope can range through a continuum from narrow to broad. Thus, using retrenchment, firms adjust the scope by discontinuing SKUs, products, segments, lines of products, lines of business stock keeping units (SKU´s), divisions, domestic geographic areas, countries and entire geographic areas or by backward or forward vertical deintegration. Depending on the choice of scope adjustment, firms will use a different type of retrenchment. Cost retrenchment is used for smaller scope adjustments and thus, for less important strategic moves. Firms requiring less important strategic moves will eliminate SKUs, products or segments. To achieve this, firms will then reduce marketing expenses, salaries and employee expenses, R&D costs, etc. These cost reductions are part of cost retrenchment (Lim et al., 2013). In smaller scope adjustments, asset retrenchment becomes less important, and will

typically be limited to inventory or equipment reductions. By contrast, asset retrenchment is required for larger scope adjustments, and thus, it is required for more important strategic moves. Large scope adjustments in turnarounds are implemented through backward or forward deintegration, or the discontinuation of lines of products, lines of business, divisions, domestic geographic areas, countries, or entire geographic areas. These types of large strategic changes can be implemented mainly only through large asset reductions. Asset retrenchment actions, such as plant closing, selling off, spinning off, or carving out full portions of the business (Lim et al., 2013), are required to accomplish those important strategic changes. Furthermore, asset retrenchment has been found to work more successfully in more severe turnaround situations, that is, those situations in which a greater type of strategic adjustment is required (Hofer, 1980; Robbins and Pearce, 1992). Thus, more important strategic changes for declining firms require asset reductions. Conversely, less important strategic changes are pursued through cost retrenchment. This seems to be the view by financial markets as concluded by Morrow et al. (2004). Given that changes in the firm scope are driven by dynamic capability, asset retrenchment will have a greater dynamic capability nature as they are used for more important strategic changes.

Second, regarding competition within markets, strategy is concerned with pursuing superior profits at the individual business level from rent-producing

resources. Dynamic capabilities do not just rely on any resources but on valuable, rare, imperfectly imitable, non-substitutable (VRIN) resources (Teece, 2014a). We discuss now whether firms can reconfigure resources to generate VRIN resources only by the means of retrenchment.

The RBV perspective implies that a firm can obtain superior profits either by endowment or investment of resources (Teece, 2014b). A turnaround attempt is triggered a few years after the initiation of decline (Barker III et al., 2001; Tangpong et al., 2015). By then, the resource base tends to be depleted due to inertial constant forces acting over time (Arogyaswamy et al., 1995). The type of resources most eroded are reputational, human, and financial (Barker III and Duhaime, 1997), with the first two categories being the most important to produce a competitive advantage (Teece, 2014b). Thus, by the start of a turnaround, resource endowment of declining firms is low, given the resource base has been eroded and the stock of resources possessed are second tier. The question is, then, whether a firm with depleted resources can modify existing individual business resource base to generate VRIN resources. This view is not supported by empirical (although scarce) evidence. Sirmon et al. (2007) argues that to alter current capabilities, firms require slack. However, depletion of resources during the decline process has eroded the firm slack. Morrow Jr. et al. (2007) showed that declining firms find it difficult to improve the resource base significantly only by reconfiguring the firm's existing resources. They indicate that

declining firms will require new resources to reconfigure existing resources into new VRIN resources. Furthermore, minor acquisitions of additional resources (e.g., computer equipment and staff members) may not suffice. Declining firms will need to obtain significant levels of new resources from external sources (Morrow Jr. et al., 2007).

In summary, reconfiguring the resource base to generate VRIN resources at the individual declining business is hardly feasible only through retrenchment, given that the firm will require acquiring significant levels of external resources after a period of resource erosion. Thus, using retrenchment, the feasible changes to the individual business resource base mainly will be operational and not strategic. Then, the principal strategic alternative during retrenchment is reducing assets and costs to refocus the firm scope (Boyne and Meier, 2009; Sirmon et al., 2011). Scope refocusing is a strategic activity and involves dynamic capabilities. Broader scope with more important strategic changes requires asset reallocations through asset retrenchment, given that the potential of cost retrenchment for strategic change is narrower. Thus, asset retrenchment has a more dynamic capability than cost retrenchment.

Finally, when declining firms adjust the firm scope or reconfigure resources through retrenchment, they will use some of the dynamic capabilities described earlier, which are part of the sensing and seizing clusters of

dynamic capabilities. Among the dynamic capabilities most used are analytical methodologies (Teece, 2012), learning (Zollo and Winter, 2002), strategic decision-making (Katkalo et al., 2010; Slater et al., 2006), operations alteration capabilities (Helfat and Winter, 2011), divestment (Mathews, 2003; Moliterno and Wiersema, 2007; Teece, 2014b), and unlearning (Lavie, 2006; Schilke, 2014).

Function 3: Retrenchment as a means to improve operations. Declining cash-strapped firms use asset and cost retrenchment to become more profitable and competitive by analyzing the efficiency of their operations and by benchmarking them with the industry. First, declining firms analyze their internal structure to find surplus expenses and inefficient operations. Once they find surplus expenses and redundant assets, they use asset retrenchment and cost retrenchment to become more operationally efficient. Even though activities oriented to raise operational efficiency are necessary to achieve superior profits, they cannot be considered strategic but operational (Grant, 2013; Porter, 1996). Strategy involves "doing things differently," whereas efficiency measures involve "doing the same things on a smaller or more efficient way" (Pearce II and Robbins, 1993: p. 621). Thus, when firms implement measures whose effect is to become more efficient, they involve ordinary capabilities (Helfat and Peteraf, 2003; Zahra et al.,

2006). Retrenchment as a means to improve firm efficiency is then intrinsically more related to ordinary capabilities.

Second, through industry benchmarking, declining firms align their structure to the industry average and thus, become more competitive (Grinyer and Spender, 1988). When firms benchmark they are aligning themselves to industry best practices. Teece (2014) indicates that ordinary capabilities are considered strong when the firm has achieved best practices. However, benchmarking best practices only involve ordinary capabilities and do not involve dynamic capabilities (Teece, 2014a). The reason is that benchmarking provides operational efficiency and capabilities possessing an operational nature are considered to be dynamic (Teece, 2007; Zollo and Winter, 2002).

Firms can become efficient through asset or cost retrenchment. By means of asset retrenchment, firms become more efficient by streamlining the balance sheet through the sale of inventories, raw materials, etc. In addition, firms can also become more efficient through cost retrenchment by cutting costs such as selling, general, and administrative (SGA) expenses, interest, and pensions. Cost retrenchment is the preferred alternative by managers to improve operations. Cost retrenchment allows firms to become profitable faster and requires less capital than asset retrenchment (Robbins and Pearce, 1992; Schoenberg et al., 2013). Hence, when pursuing

efficiency, firms find cost retrenchment "so pervasive as to be considered indispensable" (Robbins and Pearce, 1992: p. 303). Finally, given this function is realted to ordinary capability, cost retrenchment will have a more ordinary capability nature.

In summary, although cost retrenchment can be used for strategic purposes, firms mainly use it for operational improvement and cash generation purposes. That is for two reasons. First, cost retrenchment allows a faster and less capital-consuming introduction of efficiency measures and cash generation. Second, the amount of strategic change that can be implemented through cost retrenchment is limited given larger strategic changes require asset reallocations. Given, the higher efficiency seeking nature of cost retrenchment, the measure will possess a more ordinary capability nature.

Conversely, asset retrenchment can be used to generate cash and improve operations. However, firms mainly use it to implement strategic change. First, asset retrenchment requires the transfer of assets which is a slow and difficult process, whereas cash-strapped firms require fast liquidity generation. Second, asset retrenchment is a more optimal choice to modify a firm's strategy given that it allows more important strategic moves. Given the larger strategic nature of asset retrenchment, it will be more related to dynamic capability.

Finally, dynamic capabilities allow a firm to perform better than ordinary capabilities in conditions of high environmental dynamism (Drnevich and Kriauciunas, 2011; Schilke, 2014). The greater the dynamism, the greater the need and opportunity to create, extend, or modify the dynamic capabilities clustered in asset retrenchment or cost retrenchment. Thus, asset retrenchment, the retrenchment strategy with a more dynamic capability-oriented nature, will produce higher gains in a dynamic environment than cost retrenchment. Hence, we propose the following hypothesis.

Hypothesis 2: The moderating effect of environmental dynamism on the relationship between retrenchment and performance will be stronger for asset retrenchment than for cost retrenchment.

4. Method

To test the hypotheses concerning dynamic capabilities, theorists have suggested that researchers select a set of business processes in which these capabilities exist (Gruber et al., 2010; Helfat and Winter, 2011; Schilke, 2014) because dynamic capabilities are abstract and intractable (Danneels,

2011). Retrenchment is consistent with this abstraction, and it is composed of a set of dynamic capabilities widely recognized by the literature.

4.1 Sample

To test our hypotheses, we used a sample of Spanish companies in a turnaround situation during the period 2000 and 2005 and analyzed their performance two years later (2002-2007). Consistent with prior research, we chose a period that included moderate economic growth and expansion in the Spanish economy (Morrow et al., 2004). This allowed us to exclude the possibility that the reason why firms in our sample are in decline is attributable to an outright recession or environmental jolt.

Our data was compiled from the Bureau Van Dijk database (SABI). The database is the equivalent to the US Compustat or Japan NEEDS databases and includes all legally incorporated firms in Spain. The database provides financial information included in the corporate reports of private and public firms. Corporate reports are a reliable source of data for longitudinal studies. Such reports provide consistent information (Klarner and Raisch, 2013). Contrastingly, data from questionnaires can be contaminated by respondent bias (Barr and Huff, 1997).

To select our sample, we selected all firms in Spain with over 250 employees during the sample period and thereby excluded all the small and medium firms. This provided a sample of 4,242 firms. Prior research has used 500

employees (Lim et al., 2013; Lu and Beamish, 2004) as a threshold, consistent with the US Small Business Administration definition of a small firm. We reduced the threshold to 250 employees for two reasons: first, the threshold for small and medium-sized firms according to the European Commission is 250 employees. Second, the average firm size in Spain is smaller than the average firm in the US or Japan. Although our sample firms are smaller, all firms were legally obligated to be audited by public accounting firms according to published Spanish auditing standards under penalties of personal liabilities; therefore, all financial data used in our sample have been audited.

From this sample, we chose only single business manufacturing firms with activity in one industry based on the three-digit US SIC code (Morrow et al., 2004). In selecting manufacturing firms, we recognize the different nature of turnaround in manufacturing and service firms (Barker III and Duhaime, 1997) and align our research to traditional turnaround literature to make our results more comparable to the broad turnaround literature (Barker III and Mone, 1998). The literature has argued that diversified firms do not provide sufficient information concerning retrenchment activity because the financial results of each business are reported in an amalgamated format (Morrow et al., 2004). The data we use are accurate because the database provides information by legal entity, not by listed company. The business practice in Spain is to isolate business activity in one legal entity. Therefore,

data obtained from the Bureau Van Dijk database captures the data based on individual activities. This selection procedure provided us with 988 firms.

Following prior research, we selected firms involved in turnaround situations based on the following three criteria (Morrow et al., 2004; Pearce and Robbins, 1994; Robbins and Pearce, 1992). First, the firm was required to have experienced at least three years of declining performance preceded by two years of a successive increase in firm performance (Bruton et al., 2003). We used return on sales as the performance measure (Lim et al., 2013). Second, the firm was required to have incurred an operating loss in the last year of the three-year declining performance period (Bruton et al., 2003; Chen and Hambrick, 2012). Third, the firm was required to be strictly engaged in either asset or cost retrenchment. Asset retrenchment was calculated as a decrease in total assets by more than 5% (Lim et al., 2013; Morrow et al., 2004). Cost retrenchment was defined as a cut in SGA by more than 5% (Lim et al., 2013; Morrow Jr. et al., 2004). A total of 263 firms were selected. Firms with missing financial data were excluded and 230 firms (88% of the population) remained in the sample. The unbalanced sample contained 1,380 observations.

4.2 Measurements

Dependent variable. Three firm performance variables have typically been used in turnaround research: Return on assets (ROA), return on investment (ROI), and return on sales (ROS). We avoided using ROA or ROI because of prior research concerns. ROA is highly correlated with asset retrenchment, one of our independent variables and could, therefore, increase without actual performance (Trahms et al., 2013). ROI has been considered a poor reflection of the actual performance level of retrenching firms (Barker and Mone, 1994). Moreover, ROS is a measure of performance also used as a dependent variable in other dynamic capabilities studies (Schilke, 2014; Shamsie et al., 2009). We measured firm performance as the industry-adjusted annual ROS (Lim et al., 2013). Other theorists have also measured firm performance using industry-adjusted data (Lim et al., 2013; Morrow et al., 2004). Firm ROS was sector-adjusted at the three-digit US SIC code (Krause et al., 2013; Lim et al., 2013).

The retrenchment literature has examined turnaround outcomes using a two- to three-year time lag from the retrenchment event (Bruton et al., 2003; Lim et al., 2013; Morrow et al., 2004; Robbins and Pearce, 1992). The average firm size in our sample is smaller than previous studies. Some studies have suggested that turnaround results emerge over a longer period in larger organizations (Bruton et al., 2003; Paint, 1991); hence, we selected a two-year lag (Morrow et al., 2004).

Independent variables. We used three independent variables: (1) asset retrenchment, (2) cost retrenchment, and (3) industry dynamism. Consistent with previous research (Lim et al., 2013; Morrow et al., 2004), we used asset retrenchment measured as a reduction in total assets (Lim et al., 2013; Robbins and Pearce, 1992). Cost retrenchment was measured as a reduction in SGA (Lim et al., 2013). The firm cost base was calculated yearly as SGA plus interest expenses. Both variables were reverse coded. Industry dynamism consists of the instability and unpredictability of the firm´s external environment (Miller et al., 1982). Dynamic environments undergo rapid, drastic, and unpredictable change resulting in a lack of firm information (Farjoun and Levin, 2011). To capture such instability and unpredictability researchers have used diverse sources of information ranging from field interviews (Miller et al., 1982; Schilke, 2014) to variation-based indexes in industrial- level activities (Nielsen and Nielsen, 2013; Patel and Cooper, 2014; Pathak et al., 2013). We operationalized industry dynamism using a variation based index very commonly used (Nielsen and Nielsen, 2013; Patel and Cooper, 2014). We operationalized the construct as the regression of time on total industry sales by all firms for the last five years. Then, the standard error of the regression slope coefficient is then divided by the mean industry sales for the five-year period (Boyd, 1990; Dess and Beard, 1984; Pathak et al., 2013). Industry sales were obtained using data from the Bureau van Dijk database (SABI), which provides sales for all

the legally incorporated for-profit entities in Spain at the sector's four-digit level.

Control variables. This study included seven control variables to mitigate potential misinterpretations of our findings. The initial state of the firm can impact the firm´s retrenchment process (Lim et al., 2013; Love and Nohria, 2005; Morrow et al., 2004). We included the variable severity to control for this impact, which was calculated as the sector-adjusted ROS the year prior to retrenchment. Organizational performance is likely to vary with the size and age of a firm. Prior studies have shown that firm size negatively affects the ability of managers to execute changes (Boyne and Meier, 2009; Hambrick and D´Aveni, 1988; Schmitt and Raisch, 2013). The number of employees was used to measure firm size (Lim et al., 2013; Morrow et al., 2004). Firm age was measured as the number of years since founding (Latham and Braun, 2009). We log-transformed these two variables to reduce highly skewed values. Four further control variables were used: slack, gearing, liquidity, and munificence. Slack represents short-term resource accessibility. Previous research has shown evidence of the extensive influence of slack in turnaround research (Trahms et al., 2013) and in turnaround success (Hambrick and D´Aveni, 1988; Morrow et al., 2004). Slack was measured as working capital divided by total assets (Morrow Jr.

et al., 2007). We included gearing as a control variable because debt limits an organization´s ability to turn around (Powell, 2001; Trahms et al., 2013). Gearing was measured as the total debt to total asset ratio (Chen and Hambrick, 2012; Schmitt and Raisch, 2013). Liquidity was operationalized as the current ratio (Morrow et al., 2004). We also controlled for munificence because munificent industries have been observed to improve turnaround performance (Morrow et al., 2004). Industry munificence was operationalized as the regression coefficient of time on annual average sales for each industry, divided by the mean value of sales (Dess and Beard, 1984; Nielsen and Nielsen, 2013). Finally, because we sector-adjusted our dependent variable, and to avoid redundant analysis, we excluded industry control variables from our model (Dess and Beard, 1984; Nielsen and Nielsen, 2013).

4.3 Analysis

We analyzed our hypotheses using the two-step Generalized Method of Moments (GMM) developed by Arellano and Bond (1991) and Blundell and Bond (1998). The method proposes a dynamic panel generalized method of moments estimator. We employed the Arellano-Bond estimation because it offers four advantages to our study: 1) We use a lagged dependent variable, which raises concerns about potential inconsistency in

estimates because of the likelihood that the lagged dependent variable is correlated with the error term (Greene, 2003). The Arellano-Bond method accounts for the dynamic nature of the dependent variable and its dependence on its lagged values. 2) Our variable *severity* has a time invariant nature. System GMM allows the inclusion of time invariant regressors (Roodman, 2009). 3) The method accounts for the effects of unobserved firm-specific heterogeneity, eliminating the risk of obtaining biased results arising from this heterogeneity (Hsiao, 1993). 4) The literature has demonstrated the effect of endogeneity on multiple variables typically used in turnaround studies (Datta et al., 2010). GMM allows us to avoid concerns of endogeneity that could affect the estimation results. We employ the robust two-step system GMM estimator with the Windmeijer corrected standard errors to correct for the downward bias on standard errors (Arellano and Bond, 1991; Blundell and Bond, 1998). The estimator provides estimates that are robust to the presence of autocorrelation and heteroskedasticity.

Our model included one lag of the dependent variable and independent and control variables and interaction terms specified as endogenous. We used these variables lagged up to three times as instruments. We used the variables age, dynamism, munificence, and the time dummies as exogenous instruments to reduce the possibility of spurious effects. We mean-centered all the independent variables that constitute the

interaction terms to avoid multicollinearity (Aiken and West, 1991). Mean-centering the variables also simplified coefficient interpretation.

5. Results

Table 1 presents the descriptive statistics and correlation matrix for all of the variables used in the study. The values are shown prior to mean-centering and log.

Insert Table 1 about here

Table 2 presents the results for the determinants of performance based on system GMM estimations. The table presents four double columns corresponding to each of our four models. Each column includes the beta and the standard error for each model. All of the models in Table 2 are significant, and the stepwise addition of variables improves the fit over the preceding model based on the χ^2.

Insert Table 2 about here

All reported models include year dummies to control for any idiosyncratic effects resulting from fluctuations in macroeconomic conditions. Model 1 represents the baseline model reporting the effect of the control and main effects variables. Model 1 indicates that cost retrenchment (b = 0.019, p < 0.05) is significant and positively associated with firm performance.

Models 2 to 4 include the interaction terms required to test the hypotheses. In models 2 and 3, the two interaction terms are introduced one at a time. In model 4, the two interaction terms are introduced into the regression simultaneously. Hypothesis 1 posits that the higher the dynamism, the stronger the effects of retrenchment. As shown in table 2, the interaction terms in Model 2 (Asset Retr X Dynamism) and Model 3 (Cost Retr X Dynamism) are both positive (b = 0.014 and b = 0.006, respectively) and significant (p < 0.001 and p < 0.01, respectively), providing support for Hypothesis 1. Model 4 includes both interaction terms simultaneously. The coefficients in Model 4 for asset retrenchment and cost retrenchment interaction with dynamism are both positive (b = 0.012 and b = 0.003, respectively) and significant (p<0.01 and p<0.05, respectively), consistent with the predictions of Hypothesis 1.

We can also use Models 2, 3, and 4 to evaluate Hypothesis 2. Hypothesis 2 predicts that the moderating effects of asset retrenchment will be stronger than the moderating effects of cost retrenchment the higher the level of

dynamism. The interaction of asset retrenchment and dynamism in Model 2 is greater than the interaction of cost retrenchment and dynamism in Model 3. Model 4 shows that when both interaction terms are included simultaneously, the interaction of asset retrenchment and dynamism is greater than that of cost retrenchment and dynamism, providing support for Hypothesis 2.

To further demonstrate the moderating effects of dynamism on the relationship between asset and cost retrenchment and firm performance, we plotted the relationships (Figures 1 and 2). Figures 1 and 2 show that the effects of asset and cost retrenchment on firm performance are greater in highly dynamic environments, and the slope of the relationship is more pronounced and positive the greater the dynamism. However, a comparison of both types of retrenchment reveals that the effects of asset retrenchment are greater than the effects of cost retrenchment.

INSERT FIGURES 1 & 2 ABOUT HERE

In summary, we find that dynamism positively moderates the relationship between retrenchment and performance in turnaround firms. The conclusion is applicable to both asset and cost retrenchment. However, the

effects of dynamism are greater for asset retrenchment than for cost retrenchment. With respect to the control variables, the results are consistent with previous research findings (Morrow et al., 2004; Schmitt and Raisch, 2013). We find that liquidity has a significant positive effect on firm performance. Similarly, severity also has a consistent significant positive effect on performance (Morrow et al., 2004).

6. Discussion

Firm decline has been linked, among other factors, to environmentally related causes in the literature (Arogyaswamy et al., 1995; Trahms et al., 2013). Studies have found interactive effects of industry type or industry munificence on the relationship between retrenchment and performance (Lim et al., 2013; Morrow et al., 2004; Ndofor et al., 2013). Such refinement has shed some light on the role of industry traits on retrenchment success. However, extant turnaround research ignores the interactive effects of dynamism on retrenchment. In parallel, turnaround research has mainly been phenomenon-driven with less theoretical development (Trahms et al., 2013). Nevertheless, the use of relevant theories advances the field because they act as a source of new discoveries (Trahms et al., 2013).

The primary goal of our study is to contribute to the retrenchment literature by examining the role of dynamism on retrenchment actions using a

relevant framework: the dynamic capabilities framework is applicable to situations of significant change and we have used it to argue the effects of dynamism on core turnaround actions – asset and cost retrenchment. We have theorized that retrenching firms perform a series of activities, some of which are considered dynamic capabilities by many scholars. Our results support the hypothesis that the more dynamic the environment, the more effective retrenchment actions are on turning around firm performance. If retrenchment represents a set of dynamic capabilities, the use of these capabilities under a dynamic environment will enhance performance, as other scholars have found in contexts other than declining firms (Drnevich and Kriauciunas, 2011; Schilke, 2014). Although our findings are consistent with those of Schilke (2014a) and Drnevich and Kriauciunas (2011), the results are more aligned to those of Drnevich and Kriauciunas (2011) given that the positive relationship between the interactive effect of dynamic capabilities and dynamism on performance that we found is linear rather than curvilinear. The fact that some authors find a linear relationship while others find a curvilinear one could be related to the type of capability used to measure the dynamic capabilities construct. Future research might pay attention to the differences in performance by the interaction between the different types of dynamic capabilities and dynamism.

The second goal of our study is to examine the differences between the performance of asset and cost retrenchment in a dynamic environment.

We argue that asset retrenchment is more dynamic capability-oriented than cost retrenchment because asset retrenchment is more strategic, whereas cost retrenchment is more operational and efficiency-oriented. We found that the effect of both types of retrenchment is positive under dynamic conditions. However, consistent with our predictions, we found gains generated through asset retrenchment to be greater than those generated from cost retrenchment. Our research suggests that efficiency-oriented measures, such as cost retrenchment, are less suited to highly dynamic environments than more strategic-oriented measures such as asset retrenchment. The effects of cost retrenchment, involving a set of dynamic capabilities, are positive for firm performance. Conversely, less efficiency-oriented and more strategic and flexibility-oriented measures, such as asset retrenchment, are more suited to dynamic environments.

Our results differ from those of Lim et al. (2013), who found that asset retrenchment is a suboptimal choice for firms operating in a Ricardian industry or sector, such as manufacturing. However, the authors recognize that their results are not clear-cut. By contrast, our results in a manufacturing-only (Ricardian type) sample show that the effects of asset retrenchment on firm performance are higher than those by cost retrenchment. In addition, seminal studies on turnaround performance in the manufacturing industry seem to confirm the higher performing nature of asset retrenchment over that of cost retrenchment (Barker and Mone, 1994;

Robbins and Pearce, 1992). Although the topic is not the focus of our study, future research should revisit the relationship between retrenchment strategy and type of industry as an important topic of research.

Our study represents a contribution to both the turnaround literature and the dynamic capabilities literature. We followed recent research focusing on the effects of the environment on turnarounds and retrenchment (Boyne and Meier, 2009; Lim et al., 2013; Morrow et al., 2004). These studies showed how the characteristics of a sector –munificence, the type of sector, Schumpeterian/Ricardian – impact retrenchment. Our findings extend this research and provide arguments and evidence that dynamism also has an impact on the effects of retrenchment. Our work also represents a contribution to the dynamic capabilities literature. It has been argued that more research on dynamic capabilities is needed for new types of firms (Barreto, 2010). Our work focuses on the sparse literature researching the use of dynamic capabilities by surviving firms (Danneels, 2011; Zúñiga-Vicente and Vicente-Lorente, 2006). Our results suggest that the dynamic capabilities framework can be used beyond stable firms. The framework is applicable to situations of firm radical change (Eisenhardt and Martin, 2000; Helfat and Winter, 2011; Teece, 2007; Teece et al., 1997), such as turnaround situations (Teece, 2012). Organizational decline is caused, among other factors, by environmental changes, and a firm´s set of dynamic capabilities can help reverse the situation.

For managers, our research indicates that when a turnaround is initiated upon a highly dynamic environment, the greater the extent of retrenchment action taken, the higher the potential gains. Our research suggests that, in dynamic environments, managers of declining firms have the opportunity to exercise those dynamic capabilities that retrenchment represents. By exercising retrenchment to a greater extent, managers will experience greater potential gains. A declining firm manager´s logic response in a highly dynamic environment could be to take cautious retrenchment action, or even cease retrenchment until the environment is stabilized and a clearer picture has emerged. Our research suggests that the inverse will produce greater performance. Under conditions of a high level of dynamism, the greater the extent of either type of retrenchment, the greater the potential gains. Our research also suggests that in highly dynamic conditions, declining firms will obtain greater gains when a manager uses asset retrenchment. Firm strategizing through asset retrenchment is likely to secure greater gains for the firm. Cost retrenchment will also improve firm performance; however, the expected gains are likely to be fewer.

7. Limitations and directions for future research

This study is one of the first to examine turnarounds under a dynamic capabilities framework. Consistent with other scholars (Teece, 2012), we argue that the dynamic capabilities framework is applicable to firms undergoing turnaround. Future research can expand the analysis of dynamic capabilities in turnaround research. Specifically, future research may explore the use of dynamic capabilities not only during the retrenchment stage but also during recovery. Recovery is a more dynamic capability-intensive stage than retrenchment. Firms in the recovery stage are afforded more strategic options because cash flow is positive and there are more available resources.

One of the least discussed topics in dynamic capabilities framework and turnaround literature is the speed of the sensing and seizing process. Turnarounds are situations that threaten an organization´s continued viability; therefore, the pace of dynamic capability development during retrenchment or recovery is a critical success factor in turnarounds (Bibeault, 1982; Boyne and Meier, 2009). Some authors have posited the significance of the speed of communication (Hambrick and D´Aveni, 1992) and decision-making (Adner and Helfat, 2003) so that resources can be realigned or reconfigured to align with the requirements of the environment

(Eisenhardt and Martin, 2000; Teece, 2012; Zahra et al., 2006). Future research could analyze the speed of sensing and seizing on turnarounds.

There are three limitations to our data. First, we only use financial ratios provided by the firm. Some of the latest research has used a market dependent variable for robustness checks, such as market-to-book value (Chen and Hambrick, 2012), Jensen´s Alpha (Morrow Jr. et al., 2007) or Tobin´s Q (Morrow et al., 2004). Given that a large percentage of the companies in our sample were not listed, we were only able to use financial ratios as the dependent variable. Second, our analysis does not use all possible controls used in retrenchment research. We were unable to include export intensity, type of industry based on growth, or the Schumpeterian/Ricardian dyad sector type (Chen and Hambrick, 2012; Lim et al., 2013; Morrow et al., 2004; Ndofor et al., 2013) because the information was unavailable for our dataset. Third, the average firm size of our sample is smaller than that of other studies (Lim et al. 2013, Ndofor, Vanevenhoven, and Barker 2013, Chen and Hambrick 2012, Morrow Jr., Johnson, and Busenitz 2004). The number of Spanish firms with more than 500 employees is lower than the number for other countries. Consequently, the employee threshold of our sample had to be reduced to 250 employees to obtain sufficient explanatory power.

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Table 1: Descriptive statistics and correlations

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Return on sales (adjusted)	-0.04	0.40	1									
2. Severity	-0.07	0.24	0.18	1								
3. Asset retrenchment	-0.02	0.44	0.01	-0.01	1							
4. Cost retrenchment	-0.07	0.88	0.03	-0.01	0.12	1						
5. Dynamism	5.57	6.26	-0.02	-0.02	0.03	0.04	1					
6. Munificence	0.09	0.05	0.02	0.02	-0.02	-0.02	0.15	1				
7. Firm age	36.58	19.75	0.12	0.04	0.02	0.05	-0.09	-0.02	1			
8. Firm size [a]	716.25	1398.69	0.06	0.06	-0.00	0.02	-0.04	-0.08	0.15	1		
9. Gearing	0.95	2.33	-0.04	0.03	-0.02	-0.03	0.01	0.05	0.02	-0.02	1	
10. Liquidity	0.94	0.99	0.03	0.02	-0.01	-0.03	-0.04	-0.03	-0.00	-0.01	0.05	1
11. Slack	0.09	0.24	0.06	0.00	0.00	0.03	-0.06	0.07	0.15	0.09	-0.02	0.03

[a] [b] In thousands of euros

Table 2: System GMM: Effects of asset and cost retrenchment on return on sales (t + 2) [a]

	Model 1		Model 2		Model 3		Model 4	
Control variables								
(Constant)	-0.26	(0.18)	-0.25	(0.17)	-0.17	(0.14)	-0.25	(0.15)
ROS adj (t-1)	0.25**	(0.08)	0.26**	(0.08)	0.21**	(0.07)	0.23**	(0.07)
Severity	0.13	(0.10)	0.17*	(0.08)	0.17†	(0.09)	0.19*	(0.09)
Firm age [b]	0.02*	(0.01)	0.02†	(0.01)	0.02	(0.01)	0.02	(0.01)
Firm size [b]	0.02	(0.02)	0.02	(0.02)	0.01	(0.02)	0.02	(0.02)
Leverage	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)	-0.00	(0.00)
Liquidity	0.02**	(0.00)	0.02***	(0.00)	0.03**	(0.00)	0.03***	(0.00)
Slack	-0.01	(0.05)	0.02	(0.04)	0.01	(0.04)	0.00	(0.04)
Munificience	0.09	(0.11)	0.13	(0.11)	0.04	(0.10)	0.05	(0.11)
Main effects								
Dynamism	**-0.00**	**(0.00)**	**-0.00**	**(0.00)**	**-0.00**	**(0.00)**	**-0.00**	**(0.00)**
Asset retrenchment	**0.06**	**(0.04)**	**0.10***	**(0.04)**	**0.06**	**(0.04)**	**0.10***	**(0.04)**
Cost retrenchment	**0.01***	**(0.00)**	**0.01****	**(0.00)**	**0.02*****	**(0.00)**	**0.02****	**(0.00)**
Interaction effects								
Asset Retr X Dynamism			**0.01*****	**(0.00)**			**0.01****	**(0.00)**
Cost Retr X Dynamism					**0.00****	**(0.00)**	**0.00***	**(0.00)**
Time Dummies	Included		Included		Included		Included	
Chi-squared statistic	63.18***		144.59***		115.12***		244.36***	
Hansen (p value)	0.70		0.82		0.68		0.49	
Number of instruments	78		87		87		96	
Hansen for DV lags (p value)	0.64		0.78		0.70		0.56	
Serial correlation: AR(1) test	0.00		0.00		0.00		0.00	
Serial correlation: AR(2) test	0.96		0.75		0.93		0.88	
Observations (groups)	841 (230)		841 (230)		841 (230)		841 (230)	

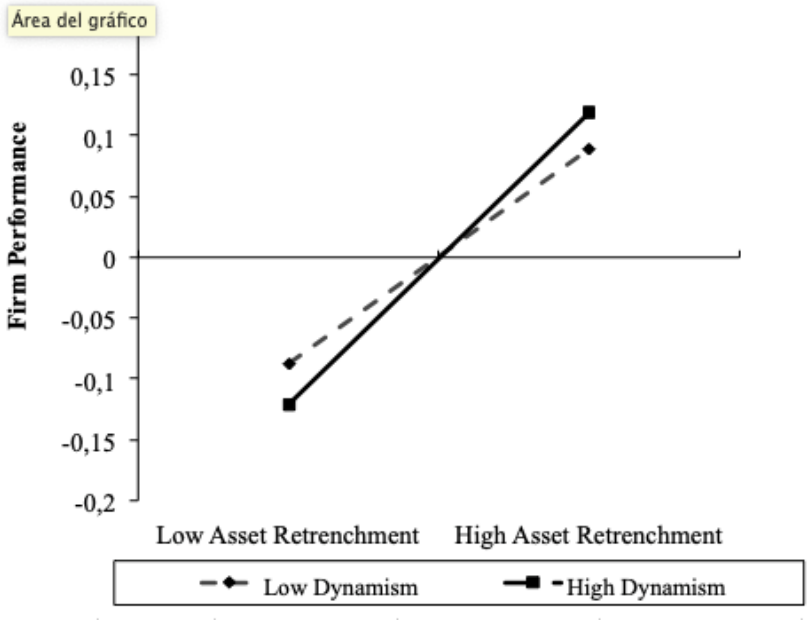
[a] Panel data models with year controls using system GMM estimation are presented. The dependent variable is return on sales (industry-adjus

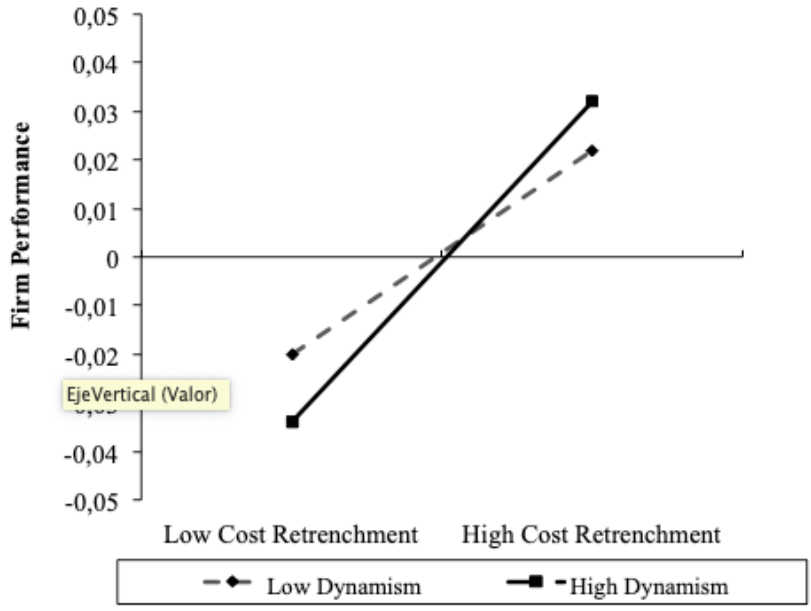
for firm *i* at time *t* + 2. Robust standard errors are in parentheses. Year dummy variables are omitted here.

[b] Logarithm.

†p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001.

Figures 1 and 2: Interaction between dynamism and asset retrenchment and cost retrenchment





THIRD CHAPTER

TIMING OF CEO DISMISSAL UNDER CORPORATE CRISIS. A TEMPORAL APPROACH TO CEO SUCCESSION

1. Introduction

Traditional literature, as well as more recent research, has unanimous and consistently acknowledged the importance of leadership to declining firms (Abebe, Angriawan, & Liu, 2011; Arogyaswamy, Barker, & Yasai-Ardekani, 1995; Bibeault, 1982; Slatter, Lovett, & Barlow, 2006; Tang & Crossan, 2016; Trahms, Ndofor, & Sirmon, 2013; Whitney, 1987). One topic that has specially captured the attention of decline research is management replacement (Barker III, Patterson Jr., & Mueller, 2001; Castrogiovanni, Baliga, & Kidwell, 1992; Chen & Hambrick, 2012; Davidson, W; Worrell, D; Dutia, 1993; Winn, 1997). This attention is seemingly based on two facts. First, the high degree of lever CEO replacement exercises on turnaround outcomes (Berns & Klarner, 2017; Chen & Hambrick, 2012; Mueller & Barker, 1997). Second, the fact that CEO replacement is natural to firm decline (Denis & Kruse, 2000; Ocasio, 1994; Weitzel & Jonsson, 1989), as the rate tends to double that of stable firms (Chen & Hambrick, 2012). Thus, executive replacement in declining firms is a topic worth of special attention.

Parallelly, latest research has advanced the turnaround field by studying the effect of time on turnaround measures and their effect on declining firms performance (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong, Abebe, & Li, 2015). The study of decline from a temporal approach offers an excellent match because, as shown by those recent studies, and as

argued by traditional literature (Hambrick & D´Aveni, 1988; Zimmerman, 1991), early and fast action is critical to declining firms (Barbero, J., Di Pietro, F., Chiang, 2017; Bibeault, 1982; Robbins & Pearce, 1992; Tangpong et al., 2015). Based on the findings, the temporal approach implies a substantial change to turnaround research: the gist of the approach is turnaround success does not depend on the measures taken, but on the moment they are taken. The research question shifts from *whether or not* certain actions should be executed to *when* are (the precise moment) these actions executed. In short, the actions carried out have only value in a temporal context. This new approach seems a valid path for the advancement of turnaround research after scholars have recognized progress has slowed and the field has been littered with fragmentation and mixed results (Trahms et al., 2013).

In our paper, we apply a time approach to the study of CEO replacement events in declining firms. Although scholars have suggested the need for early CEO replacement in declining organizations (Castrogiovanni et al., 1992; Weitzel & Jonsson, 1989), the study of the timing of CEO succession is a future valid topic of research (Berns & Klarner, 2017). These scholars have suggested CEO replacement is better during the faulty action stage of decline. Still, faulty action can become very costly for the organization and

if the firm slides to this stage there is the risk of organizational liquidation. In our study, we delve into the question of under what circumstances does an early CEO replacement decision helps or hinders organizational survival. In other words, are there circumstances under which we can safely predict turnaround success in a forced CEO succession? Current studies on time and turnarounds have offered evidence that early and fast action positively affect turnaround success (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015). As argued by the downward spiral perspective, decline is a protracted process that erodes firm resources. Thus, time (early/fast action) is critical to turnaround success. We apply this time approach to CEO replacement. We hypothesize and test whether the causes of decline (internal vs external), CEO tenure, and duality (CEO power) interact with the positive effect of a fast CEO replacement on turnaround success. Despite our build on the downward spiral perspective, consistent with prior CEO succession studies (Berns & Klarner, 2017; Finkelstein & D´Aveni, 1994) and decline studies (Barbero, J., Di Pietro, F., Chiang, 2017; Schmitt, Barker, Raisch, & Whetten, 2016), we use a pluralistic theory approach to argue our hypothesis. Our conceptual model is depicted in figure 1.

Insert Figure 1 about here

Using data from Compustat and Execucomp, we select a matched pair sample of 80 firms in decline between 1996 and 2007. This methodology is consistent with leading latest turnaround research (Chen, 2014; Ndofor, Vanevenhoven, & Barker, 2013; Tangpong et al., 2015). We find that the positive effect between an early timing of CEO replacement and turnaround success is positively moderated by the internal causes of decline and CEO long tenure. Such relationship is negatively moderated by CEO duality.

In the next section we develop the concept of CEO replacement and clarify its relationship with the downward spiral perspective. Next, we argue our hypotheses. We explain our methodology and the results in the two following sections. Finally, we discuss our results, describe the limitations of our study and propose future lines of research.

2. Theoretical background

Timing of action and turnarounds

One of the prevalent ideas of the turnaround literature is that time is critical to turnaround success, specially during the early stages of decline (Bibeault, 1982; Robbins & Pearce, 1992; Zimmerman, 1991). Only recently have scholars empirically addressed this issue (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015). Decline is a protracted process that erodes firm resources (Hambrick & D´Aveni, 1988, 1992). In a self-reinforcing process, poor performance depletes slack resources which further deteriorates firm performance (Hambrick & D´Aveni, 1988; Tangpong et al., 2015). On these basis and only recently, researchers have showed evidence that an early (timing) and fast (speed) of action will avoid organizational collapse (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015).

Other CEO replacement studies have briefly referred to the timing of CEO replacement (Berns & Klarner, 2017; Chen & Hambrick, 2012). Timing is defined as "the moment an event happens or is planned to happen" (Huy, 2001: p. 613). In our research, the focal event of study is CEO replacement.

The timing of CEO replacement is marked by the lapse of time between the onset of the decline period and the CEO replacement. An early timing of CEO replacement occurs when a CEO is replaced early with respect to the focal moment the company enters into decline. A late timing of CEO replacement occurs when a CEO is replaced late with respect to the focal moment[5].

The study of the time dimension in turnarounds represents a substantial change to prior literature. Prior turnaround research has analyzed the effect of certain measures on turnaround success. The evidence found on the effect of some of these actions has very often been mixed (i.e.: the value of retrenchment actions (Barker & Mone, 1994; Pearce & Robbins, 1994; Pearce II & Robbins, 1993a)) and it has frustrated scholars. The change in the study focus to a temporal approach represents a substantial change in the direction of turnaround research. Under this approach, the question is not *whether* a specific action has value, but *when* does the execution of a specific action has value. In other words, the value of actions are intrinsically tied to the moment they are executed.

In sum, CEO replacement is one of the actions with a greater degree of lever to turnaround performance (Berns & Klarner, 2017; Bibeault, 1982; Trahms et al., 2013). In a decline setting, characterized by resource erosion,

[5] We study early/late CEO replacement rather than fast/slow replacement. The difference is conceptual but important. The former represents the study of timing which has an event nature. The latter represents the study of speed which has a procesual nature. We study the event of CEO replacement rather than the decision process of CEO replacement.

the timing of CEO replacement will influence the outcome of decline. Next we hypothesize three factors that are likely to interact with the positive effect of CEO replacement on turnaround success.

3. Hypotheses

Timing of CEO replacement and the causes of decline

Turnaround success has been heavily linked to the causes of decline (Arogyaswamy et al., 1995; Cameron, Sutton, & Whetten, 1988; Ndofor et al., 2013; Santana, M., Valle, R., Galán, 2017). Decline can be originated by internal and by external causes. The external causes of decline are environmentally related (i.e.: business cycle, availability of credit, government regulations, etc) and as a such a firm does not have direct control on them (Arogyaswamy et al., 1995; Balcaen & Ooghe, 2006; Shein, 2013). Under internal causes, decline is inflicted by the firm on itself. These causes are intrinsically managerial (Argenti, 1976; Bruno & Leidecker, 1988; Heracleous & Werres, 2016; Slatter et al., 2006; Trahms et al., 2013) given management can decide to act and remove the factor causing decline. For example, (Bibeault, 1982) found 85% of the internal causes of decline

are managerial in nature. Slatter (1984) traced all the causes of decline ultimately to bad management.

Scholars have agreed there are several proxies representing the internal causes of decline. Munificence represents a proxy for internal causes of decline. A munificent environment is one in which there is an abundance of resources and opportunities (Boyd, 1990; Dess & Beard, 1984), and a low munificent an environment of scarcity (Wiersema, Bantel, & K:, 1993). Literature has suggested that firms in decline in a munificent environment are affected by internal causes of decline, given the environment exerts a positive effect on the firm (Barbero, J., Di Pietro, F., Chiang, 2017; Ndofor et al., 2013). Literature has also pointed out that the internal causes of decline can be best assessed by a firm´s performance compared to the industry performance: those firms whose performance is below that of the industry are affected to internal causes of decline. However, those firms still in decline, which are overperforming compared to the industry are clearly affected by external causes (Barbero, J., Di Pietro, F., Chiang, 2017; Ndofor et al., 2013).

The downward spiral perspective argues that decline is a protracted process that erodes firm resources (Hambrick & D´Aveni, 1988, 1992). The process of resource erosion will continue until action is taken to remove the circumstances causing decline. The longer the period of decline is

extended, the more deteriorated the organization will become. Under internal causes of declne, early action will avoid excessive firm deterioration by removing the main source of underperformance (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015). Hence, the earlier the action on the main cause of decline (management), this is the earlier the CEO replacement the greater the probability of turnaround. Hence, we can argue:

Hypothesis 1: In the presence of internal causes of decline, an early timing of CEO replacement will lead to turnaround success.

Timing of CEO replacement and tenure

One of the critical issues to turn a firm around is to detect the main causes of decline and to deal with them (Arogyaswamy et al., 1995; Bibeault, 1982). A mistaken diagnosis leads to further firm deterioration and finally to firm demise (Shein, 2013). Decline results from a mix of external and internal causes (Arogyaswamy et al., 1995; Schendel, Patton, & Riggs, 1976). Nevertheless, most scholars in the turnaround literature ultimately attributes failure to internal causes, being the CEO the main cause (Bibeault, 1982; Shein, 2013; Slatter, 1984).

It is well established in the literature that CEO tenure leads to underperformance. Long tenured CEOs are cognitively committed to the status quo (Castrogiovanni et al., 1992; Chen & Hambrick, 2012). First, they are more likely to fall prey to self serving bias, the unconscious motivation of top managers to conserve the status quo and unsolved themselves from responsibility (Barker & Patterson, 1996). Thus, they tend to attribute failure to external factors because they are less likely to attribute decline to past actions they were involved with (Barker & Patterson, 1996; Hedberg, Nystrom, & Starbuck, 1976). Short tenured management attribute failure to internal factors (Barker & Patterson, 1996). Hence, shorter tenured CEOs are more realistic with the causes of decline and more beneficial to organizational decline. Second, one of the key tools turnaround managers have to turn firms around is strategic change (Barker III & Duhaime, 1997; Boyne & Meier, 2009; Schmitt & Raisch, 2013). Evidence shows that because long tenured managers have been part of the firm strategy before decline, they feel less likely to lead the firm towards strategic change and tend to preserve the status quo (Barker & Barr, 2002). They make a lower number of changes as their tenure extends (Henderson, Miller, & Hambrick, 2006) and they retrench less when compared with substitute CEOs (Nag, Hambrick, & Chen, 2007). In contrast, short term tenured managers feel less committed to the current strategy and are more proactive in introducing strategic changes. Third, beyond cognitive commitment, CEOs with long tenures are

socially committed to their firms (Castrogiovanni et al., 1992; Chen & Hambrick, 2012; Simsek, Veiga, Lubatkin, & Dino, 2005). They are socially entrenched to the organization derived from long years of personal relationships with their teams (Hambrick, Geletkanycz, & Fredrickson, 1993). CEOs were an important part in the selection and promotion of those upper echelon employees, hence they are socially committed. Such social commitment causes CEO cognitive commitment, avoiding changes in their TMTs.

Both CEO cognitive and social commitment drive the organization to inaction or to slow/weak action. For declining firms, based on the downward spiral perspective, during this period of lack of appropriate action, resources deteriorate and the position of the organization becomes more fragile (Barbero, J., Di Pietro, F., Chiang, 2017; Hambrick & D´Aveni, 1988, 1992). In the case of declining firms with long tenured CEO, the earlier they replace a long tenured cognitively and socially committed CEO mismanaging the firm, the lower the resource deterioration and the greater the likelihood of turnaround success.

Second, a delay in CEO replacement implies an extension in the CEO tenure. A CEO tenure increase, will increase the cognitive and social

commitment and the organizational paralysis (Hambrick & Fukutomi, 1991). Thus, the faster the long tenured CEO of a declining firm is replaced, the lower the commitment and the earlier change is kickstarted. Accordingly, we can argue:

Hypothesis 2: In the presence of a long-tenured CEO, an early timing of CEO replacement will lead to turnaround success.

Timing of CEO replacement and CEO duality

Duality is the practice of a single individual serving as both CEO and board chair (Krause, Semadeni, & Cannella, 2014). CEO duality has been characterized as a double edged sword (Hambrick & Fukutomi, 1991). On one hand, the agency theory argues duality promotes CEO entrenchment because CEO supervision misses independent oversight. On the other, organization theory perspectives argue duality promotes unity of command (Boyd, 1995; Donaldson & Davis, 1991) which is one of the principles in turnaround management (Bibeault, 1982; Mueller & Barker, 1997; Slatter et al., 2006). Duality has been acknowledged, as one of the most contentious issues in the governance literature (Dalton & Dalton, 2011)

and even some scholars have argued that "duality is more complex that the double edged sword metaphor suggests" (Krause et al., 2014: pp. 258).

Beyond the conflicting evidence, there seems to be consensus on the fact that duality increases power and decreases CEO oversight (Krause et al., 2014). Thus, scholars have suggested that given "the devil is in the details", greater contextualization is required (Krause et al., 2014: p. 264).

Duality is a very common feature of declining organizations (Mueller & Barker, 1997). The turnaround literature has studied the effects of duality on turnaround success, also with mixed empirical results (Abebe et al., 2011; Daily & Dalton, 1995; Mueller & Barker, 1997). Beyond the empirical results, the consensus for turnaround scholars seems to clearly balance in favor of the need for duality during the early stages of decline.

A turnaround requires substantial amounts of change that are to be executed in a short lapse of time (Slatter et al., 2006; Vance, 2009). This sort of dramatic change can only be achieved in volume and in time when managerial power is concentrated. Hence, turnaround scholars have suggested managerial practices for turnaround success whose core idea is a concentration of power in the hands of leadership: turnaround

management requires centralization and tight control in the hands of a team or of a CRO (Bibeault, 1982; Cameron, Kim, & Whetten, 1987; Slatter et al., 2006); these leaders need to develop early an autocratic leadership style (Slatter et al., 2006); smaller boards outperform larger ones in high distress situations given the concentration of power in the hands of the board, can outweigh the disadvantages of CEO entrenchment (Dowell, Shackell, & Stuart, 2011). Duality is another managerial practice representing an increase of power in the hands of the turnaround leader given s/he will exert control both on the firm as the CEO and on the board as the chairman.

The downward spiral perspective suggests decline is a protracted process that erodes firm resources (Hambrick & D´Aveni, 1988, 1992). Inaction over time deteriorates firm resources. Turnarounds require early and fast action to avoid resource deterioration over time (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015). Turnaround success requires decisiveness and managers need to act quickly (Bibeault, 1982; Slatter et al., 2006; Zimmerman, 1991). The concentration of power and unity of command facilitated by duality provides managers with the capability to act fast. Fast and early action will reduce the decline period, a period during which resources are deteriorated. Thus, during the period of decline, CEO duality

will be beneficial to declining firms. In declining firms commanded by a dual situation, the earlier the CEO is replaced the lower the chances the firm will achieve a successful turnaround. Once decline has been reversed duality might have adverse effects.

Finally, the arguments the agency theory proposes are questionable in situations of decline. The agency costs in a turnaround setting are likely to be lower than in regular situations (Mueller & Barker, 1997). In a turnaround setting, CEOs may be extremely constrained to act in the interest of the firm. CEOs are threatened by the risk of organizational collapse. If the organization collapses, CEO reputation will be damaged and the chances of landing another job as CEO will be low. Clearly, as the firm nears bankruptcy the incentives to become entrenched diminish. Based on the above, we can hypothesize:

Hypothesis 3: In the presence of CEO duality, a **late** timing of CEO replacement will lead to turnaround success.

4. Methods

Data and sample

The focus of our research is the study of the timing of CEO replacement events in declining firms. We collected our sample from the Compustat

database quarterly files by selecting firms under decline listed in the Standard and Poor's 1500 Index between the years 1996 and 2007. We tracked each firm for six years after the base year (Ndofor et al., 2013). The period selected (1996-2007) represents a balanced lapse given it combines periods of economic expansion and periods of economic recession (Barbero, J., Di Pietro, F., Chiang, 2017; Morrow, Johnson, & Busenitz, 2004). We identified companies in decline as those that had two consecutive years of declining return on assets (ROA), after a base year with ROA greater than the risk free rate measured with the 6 months US T-bill (Barker III & Duhaime, 1997; Ndofor et al., 2013). Additionally, we required a negative ROA in the second year of decline to select a set of truly declining firms, characterized by showing a life-threatening event (Barker III & Duhaime, 1997; Ndofor et al., 2013). We also constrained our sample to companies that derived at least 70 percent of their sales from one single three-digit SIC industry. This is common in turnaround studies to avoid pooling effects of financial data between divisions (Guthrie & Datta, 2008; Lim, Celly, Morse, & Rowe, 2013; Morrow et al., 2004; Tangpong et al., 2015; Zhang & Rajagopalan, 2004). We also excluded financial firms (Chen, 2014; Chen & Hambrick, 2012; Lim et al., 2013). In the case, one firm met our criteria several times, we used the data the first time the firm met the criteria (Morrow et al., 2004). Based on our screening process, we drew a sample of 333 declining firms.

Our study focuses in a sample of declining firms implementing CEO replacement decisions. Some studies have looked at CEO replacement in situations of abrupt swings from profits to losses (Chen & Hambrick, 2012). These studies look at CEO replacement during the year of losses and the subsequent year. For comparability purposes, we opted for a research design in line with the traditional turnaround research. Turnaround literature conceives decline is a protracted process that lasts for several years (Barker III & Duhaime, 1997; Bibeault, 1982; Hambrick & D´Aveni, 1988). Most of the turnaround literature samples firms based on a multiyear decline period. Consistent with our choice, we selected firms executing CEO replacement during a three-year period: the two-year period of decline, plus one additional year. A three year time frame is long enough for firms to initiate a turnaround (Ndofor et al., 2013). We used the Execucomp database to draw information on the firms executing replacements and on the date of replacement. We supplemented the information obtained through the database with our own research through company news as well as company annual accounts. Out of the sample of firms in decline, we identified 228 firms with unchanged leadership during the decline period and 105 firms replacing the CEO. This figure represents a 10% annual rate of replacement which is consistent with prior turnaround research (Chen & Hambrick, 2012).

Sample selection bias

Our empirical design only allowed us to observe cases where CEO succession (change) did occur. The fact that strategic decisions such as CEO replacement typically are not random and tend to be endogenously linked to other organizational variables, there is a possibility of sample selection bias. We controlled for potential sample selection bias by using Heckman's two-stage model (Heckman, 1979), as a method of estimation to remove the selection bias. We followed the two-stage procedure outlined by Heckman (1979) and subsequently elaborated by strategy scholars (Hamilton & Nickerson, 2003; Semadeni, Withers, & Trevis Certo, 2014), common in both, turnaround (Chen, 2014; Ndofor et al., 2013; Tangpong et al., 2015) and CEO replacement studies (Chen & Hambrick, 2012). In the first stage, we ran a Probit analysis regressing the CEO replacement dummy (change CEO = 1, otherwise 0) on organizational and industry predictors. We used firm characteristics (including firm size measured by the log of total assets and by the log of the number of employees, firm performance measured by the ROA in the base year and severity measured by the Z score), departing CEO characteristics (CEO tenure in the focal firm) and industry (US SIC – 2 digits) and year dummies to predict whether the firms would change their CEOs. In the Heckman

procedure it is required to identify at least one independent variable that is associated with the dependent variable in the first-stage model, but is not related to the dependent variable in the second-stage model. This variable was size measured by the firm assets. Previous studies have documented that this variable is positively related to CEO turnover (Chen, 2014), but is not significantly associated with successful turnaround (Ndofor et al., 2013; Tangpong et al., 2015). An inversed Mill's ratio was generated in the first-stage model, and then included in the second-stage analysis as an instrumental variable (lambda) to correct for any selection bias (Heckman, 1979). We included in the second stage the results of the Probit analysis as the inverse Mills ratio variable in the main regression analyses. As shown in Table 2, the overall results are not significantly altered, suggesting that endogeneity is not a major concern.

Survival bias

Once selection bias was dealt with, we were left with a sample of 105 declining firms involved in CEO replacement during the three year period following the onset of decline.

A total of 60 of these 105 companies achieved turnaround success, while 45 were unsuccessful. In order to be considered successful, firms should meet the following requirements: a) have at least two years of increasing ROA after the two years of declining ROA, and b) have achieved and

maintained positive ROA by at least the sixth year after the base year before decline started (Ndofor et al., 2013). In the group of unsuccessful firms, some of them stopped reporting results in Compustat, thus they were classified as unsuccessful (Ndofor et al., 2013). However, all these firms reported data during our six-year period of study.

To test our hypotheses and avoid survival bias, we used a matched-pair sampling technique common in turnaround studies (Barker III & Duhaime, 1997; Chen & Hambrick, 2012; Tangpong et al., 2015). We used a propensity score-matching to identify two subsets, successful and unsuccessful firms. We employed Stata code psmatch2 for our analyses. The variables used to calculate the propensity score match were firm performance (measured by the ROA on the base year), industry growth (measured by the industry growth between the base year and the first year of decline), and capital expenditure, current ratio, Z-score measured at the base year. We also included industry and year dummies.

The final sample consisted of 40 matched pairs of successful turnaround firms and 40 unsuccessful turnaround firms. The model had a log-likelihood of -60.61 ($p<0.1$) and a pseudo R-squared of 0.14. These statistics indicate the appropriateness of the choice of independent variables, as well as the overall fit of our model. Based on the propensity score, we identified those

firms with the closest one to one match. Our final sample size was 80 firms, given we matched 40 unsuccessful firms with 40 successful firms. This sample size is reasonable compared to prior turnaround studies using matched pair sampling (Ndofor et al., 2013; Tangpong et al., 2015).

Finally as robustness and contrast test sample a t-test indicates no significant difference between the successful and unsuccessful subsamples on employees, total assets, ROA and total sales and leverage (total debt/total assets) in the base year.

Measures

Dependent variable

The dependent variable is the likelihood of turnaround success, binary coded '1' for successful turnaround and '0' otherwise as in previous turnaround research (Hambrick and D'Aveni, 1992; Mueller and Barker, 1997; Ndofor, Vanevenhoven and Barker, 2013). The operationalization of this variables has been described in the "survival bias" section.

Independent variables

The independent variable in this study is the timing of CEO replacement. We measured this variable as the time lapse (number of days) between the onset of the decline period and the date the CEO was replaced. This variable was log formed and standardized.

Moderating variables

Our hypotheses included three moderating effects: causes of decline, tenure and CEO duality. We used two measures to operationalize (internal/external) causes of decline. First, as argued above and consistent with the turnaround literature (Arogyaswamy et al., 1995; Barbero, J., Di Pietro, F., Chiang, 2017; Ndofor et al., 2013), we measured internal causes of decline with the variable munificence. A munificent environment indicates the industry enjoys sufficient resources and is profitable. Literature has pointed that firms in decline under a munificent environment are plagued with internal problems. We measured munificence with the coefficient of the regression slope of the set of sector sales divided by average value. The coefficients are based on a regression of time estimate for a given year is based on the previous five years, including the year of calculation analysis (Boyd, 1990; Dess & Beard, 1984). Second, we measured internal/external causes of decline based on whether the firm ROA is greater than the industry average ROA. The variable was coded as 1 for external causes

(Firm ROA the first year of decline>Industry ROA the first year of decline) and as 0 for internal causes (Otherwise).

Tenure was calculated as the amount of time (number of days) that a CEO holds the title in the firm. This variable was log formed.

CEO duality was operationalized as a dummy equaled 1 if the newly appointed CEO also held the position of chair of the board in the base year.

Both the independent variable as the moderators were standardized in the calculations for analyzing the effects of joint interactions do not influence the results the different levels of each of them.

Control variables

We controlled for several industry, firm and agency factors that have been suggested by previous research to potentially affect the likelihood of successful turnaround and a CEO replacement.

Retrenchment. Retrenchment is defined as a set of organizational activities to undertaken to achieve cost and asset reductions (Michael & Robbins, 1998; Morrow et al., 2004; Trahms et al., 2013). We measured retrenchment as the reduction in total assets. We calculated retrenchment the period before the CEO was replaced ((total assets quarter before the change of

management – total asset last quarter base year) / (total asset last quarter base year)), as our intention was to measure any potential effect just before the management change. We used total assets because the retrenchment strategy has been recognized as the one having a greater degree of lever on company results (Pearce II & Robbins, 1993b).

Altman Z-score: The Z-score is a measure that predicts a company´s financial distress and the probability of default (Altman, 1968).

Quick ratio: The quick ratio is calculated as the current assets minus inventories divided by the current liabilities.

Capital intensity: We computed this variable as the ratio of the total value of assets to sales revenue generated over a given period.

Board size: Board size is calculated as the number of members of the board of directors of a company in the base year.

Dynamism. Industry dynamism is a variable that measures the instability and volatility in an industry (Aldrich, 1979; Boyd, 1990; Dess & Beard, 1984). We measured this variable as the standard error of the slope of the regression divided by the average value (Boyd, 1990; Dess & Beard, 1984). We measured this variable the year the CEO was replaced.

Industry performance. The variable was calculated as the difference between the industry ROA and the Firm ROA the year of decline.

Lambda. This variable is formed with the residuals of the Heckman procedure explained in the section "Sample selection bias".

Time dummies: Finally, we included time dummies for the year decline started.

5. Results

Table 1 presents descriptive statistics and correlations for the full dataset we use in our analysis. Table 2 presents six models based on the results of our regression analysis. Models 1 and 2 are base models. Models 3 to 6 test our hypotheses. Note we have four models to test three hypotheses because hypotheses 1, the one predicting a positive interactive effect of the causes of decline on the effect of timing of replacement on turnaround success is tested with two variables (munificence and causes (dummy)); thus we have two models (Models 3 and 4) for this hypothesis 1.

The first model includes all the control variables except for timing of CEO replacement. Model 2 includes all the control variables and timing. Models 3 to 6 test our three hypotheses. Our hypothesis 1 posited that the internal causes of decline strengthens the effects of an early timing of CEO replacement on firm results. Our results show in Table 2 Model 3 for the

variable munificence is not significant, but Model 4 for the variable causes(dummy) (β = 4.40, $p < 0.01$) is significant and in line with our prediction. Figure 2 depicts in line with our prediction, when the causes of decline are internal, an early timing of CEO replacement leads to turnaround success. Also as predicted by our hypothesis 2 and as shown in Model 5, an early timing of CEO replacement (β = -2.31, $p < 0.01$) produces higher firm performance when CEO tenure is long (Figure 3). Finally, we predicted that under conditions of duality, a late timing of CEO replacement brings about a higher performance. Model 6 shows that a later timing of CEO replacement generates a higher performance under conditions of duality (β = 2.70, $p < 0.05$), confirming hypothesis 3. Figure 4 portrays this effect.

INSERT TABLES 1 AND 2, AND FIGURES 2, 3 AND 4

ABOUT HERE

As a robustness test we applied quadratic model for the timing of CEO replacement and had the variable interact with causes of decline, tenure and duality. These relationships were not significant.

6. Discussion

Research has offered considerable attention to CEO replacement with mixed evidence (Chen & Hambrick, 2012). Organizational decline is a very appropriate setting for this topic because CEO dismissal is quite more common (Mueller & Barker, 1997). Moreover, empirical studies have not paid sufficient attention to CEO replacement in turnarounds despite the importance classic studies grant the topic (Bibeault, 1982; Slatter, 1984; Whitney, 1987), and the lever CEO replacement exercises on firm results (Berns & Klarner, 2017; Chen & Hambrick, 2012).

In our study, we shift the question of *whether* a CEO should be replaced to, *when* should the CEO be replaced by using a temporal approach to turnaround study (Barbero, J., Di Pietro, F., Chiang, 2017; Tangpong et al., 2015). Specifically, we investigate the boundary conditions that influence the effect of the timing of CEO replacement on turnaround success. We build on the downward spiral perspective, and the agency and organizational theories. Next we discuss the implications for research and for practice of our study.

Implications for research

In our research we study the boundary conditions of the timing of CEO replacement in declining organizations. Chen & Hambrick (2012) did not find evidence of *whether* CEO replacement improves (direct relationship) performance in declining organizations. Because time is critical to turnarounds (Barbero, J., Di Pietro, F., Chiang, 2017; Bibeault, 1982; Robbins & Pearce, 1992; Tangpong et al., 2015), we subtlely modify the research question and study *when* should CEOs be replaced. Despite we have not hypothesized a positive effect of a fast CEO removal on turnaround success, our results indicate this relationship might be significant. This incidental but obvious finding points to those classical turnaround studies attributing the ultimate cause of decline to bad management (Bibeault, 1982; Slatter et al., 2006). If management is the ultimate cause of decline, all things being equal, an early removal will lead to superior performance when decline is eroding firm resources over time. Regardless of this finding, the core of our contribution focuses on the specification of the boundary conditions on which this relationship becomes more effective.

First, our research explores whether CEO replacement should be expedite when decline is caused by internal factors. Consistent with other studies, a firm underperforming when compared to the average industry firm indicates decline is firm-based (Ndofor et al., 2013). We find that for underperforming firms CEO replacement should be executed early. An

early replacement prevents excessive firm deterioration caused by decline´s downward spiral: when the main cause for firm deterioration is removed, performance is likely to improve. We did not however find a relationship with munificience, hence we cannot conclude based on our research that turnaround success can be achieved in munificent environments when the CEO is removed early.

Second, based on our analyses, long-tenure indicates distressed organizations have the potential to improve performance by replacing the CEO early. Being management the main cause of decline, a consistent reasoning in the turnaround literature is that "since the CEO was the principal architect of the failure it is very unlikely that he or she can form part of the solution" (Slatter et al., 2006: p. 23). We find that long-tenured CEOs should be replaced at the onset of decline rather than later. CEO cognitive and social commitments acquired over the years makes him/her unfit to lead the turnaround. Our results suggest that extending CEO tenure over the years of decline is likely to increase those commitments based on a longer tenure. As a consequence, an early timing of replacement will reduce tenure, and with it, the period during which CEO increases commitments.

Third, in the case of organizational decline, we find that duality influences positively turnaround outcomes. Our findings suggest that turnarounds is one of those circumstances under which the consolidation of power and decision making afforded by duality outweights the potential abuses described by the agency model. We found evidence that in a turnaround setting it is better not to keep the positions of the CEO and Director of the board separate, but to have a joint appointment, in lieu of an improved turnaround performance.

Implications for practice

Our study builds to the recent line of research suggesting boards of declining firms the importance of early action. Recent research is building on evidence that early and fast action in turnarounds is pervasive to most of the measures a successful turnaround requires. Although we found a direct relationship between CEO replacement and turnaround success, our findings are more theoretically and empirically supported when boundary conditions are introduced.

Critical to turnaround success is the determination of the causes of decline. Boards can easily determine whether decline is based on internal or external causes by analyzing industry munificence or the relative performance of their firm. Then based on our research, in the case the firm

is affected by internal causes of decline, boards should avoid resource erosion by replacing early the firm CEO.

Also, in the case of firms with long-tenured CEOs, swift replacement will also prevent inertial forces derived from social and cognitive CEO commitment by bringing in new leadership whose degree of commitment is lower. A lower degree of commitment is likely to release those inertial forces and halt the decline resource erosion effect. Finally, we found that unity of command represented by a dual structure of CEO and chairman of the board influences positively turnaround success. Per our research, we found that the recommendation of separation of roles issued by the majority of theory of agency studies does not hold for turnaround success: the positions of CEO and chairman of the board should be kept together, probably in lieu of fast action of these two roles and the same person.

7. Limitations and future lines of research

We have analyzed timing of CEO replacement during the early stages of decline, namely the first three years of decline, which broadly corresponds to the retrenchment stage in the two stage model proposed by (Robbins & Pearce, 1992). We believe a three-year period (period of decline) is a valid time horizon to analyze CEO replacement. Other authors have opted for a two year horizon (Chen & Hambrick, 2012) or a five year horizon (Mueller &

Barker, 1997). Future studies should extend the time horizon over a three-year period and test whether quadratic relationships are applicable in such a longer period of time.

Second, Chen & Hambrick (2012) studied CEO replacement in a type of turnaround situation in which established companies abruptly swung from satisfactory profits to losses, rather than the traditional multi-year decline turnaround. Speed of business has increased during the last decades and an abrupt decline is more common nowadays. Future studies should analyze time and CEO replacement in this type of setting. However, the period of analysis should include a later time period, which should include the post 2007 years. This is something turnaround studies have been reluctant to take on, as they have avoided the inclusion of the post "great recession" years starting 2007 and on.

Finally, those scholars in the turnaround field might pay attention to the effect of time to critical features in the literature. Literature has offered evidence of the effects of time on restructuring (Tangpong et al., 2015), retrenchment (Barbero, J., Di Pietro, F., Chiang, 2017) and downsizing (Brauer & Laamanen, 2014) on turnaround success. To mention a few, the study of time during the diagnosis of the causes of decline or the executive perceptions of the decline situation is likely to offer worthwhile insights to our knowledge of turnarounds.

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Figure 1: Conceptual model

TIMING OF CEO REPLACEMENT

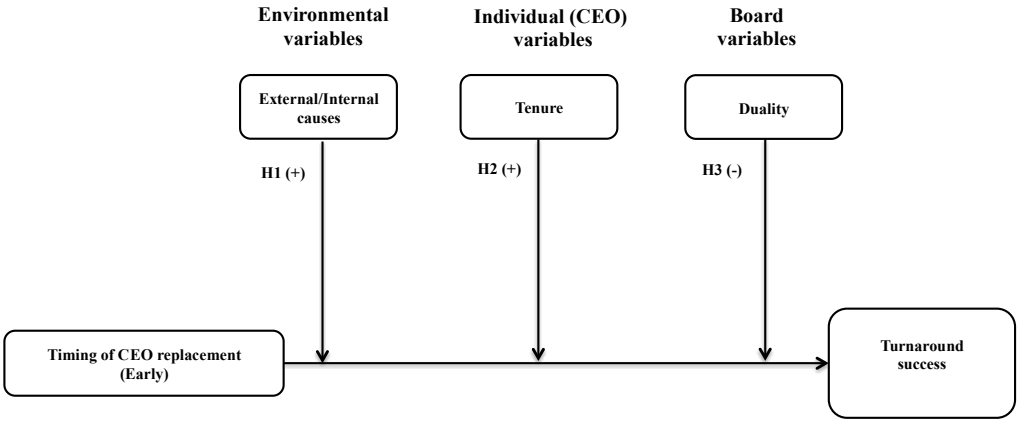


Table 1
Descriptive Statistics and Correlations

Variable	*M*	*SD*	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
1. Timing	**0.00**	**1.00**	**-4.29**	**0.83**	**1**												
2. Altman Z-score	**0.00**	**1.00**	**-1.23**	**5.34**	**0.00**	**1**											
3. Capital Investment Intensity	**0.08**	**0.13**	**0.00**	**1.02**	**-0.00**	**-0.17**	**1**										
4. Quick ratio	**1.67**	**1.67**	**0.07**	**11.02**	**0.03**	**0.13**	**-0.08**	**1**									
5. CEO Tenure	**0.00**	**1.00**	**-2.16**	**2.06**	**0.03**	**-0.01**	**0.03**	**-0.00**	**1**								
6. Retrenchment	**0.24**	**0.65**	**-0.54**	**3.70**	**0.11**	**0.08**	**0.02**	**-0.00**	**0.01**	**1**							
7. Munificence	**0.00**	**1.00**	**-2.08**	**4.03**	**-0.00**	**0.13**	**-0.05**	**0.04**	**-0.01**	**0.26***	**1**						

8. Dynamism	**0.04**	**0.45**	**0.00**	**0.33**	**0.00**	**-0.11**	**0.08**	**-0.07**	**0.20**	**-0.02**	**0.50***	**1**					
9. Industry performance	**4.31**	**76.88**	**-422.11**	**18.37**	**0.14**	**-0.04**	**0.06**	**-0.08**	**-0.11**	**0.04**	**-0.04**	**0.12**	**1**				
10. Dummy Causes	**0.16**	**0.37**	**0.00**	**1.00**	**-0.11**	**-0.14**	**0.08**	**-0.19**	**-0.25***	**0.00**	**-0.05**	**-0.10**	**0.29***	**1**			
11. Board Size	**9.74**	**2.50**	**1.00**	**16.00**	**-0.06**	**-0.13**	**0.01**	**-0.29***	**0.06**	**0.28***	**-0.09**	**-0.09**	**-0.07**	**0.20**	**1**		
12. CEO Duality	**0.61**	**0.49**	**0.00**	**1.00**	**0.33***	**0.19**	**0.11**	**0.10**	**0.22**	**-0.08**	**0.03**	**0.15**	**0.11**	**0.07**	**-0.17**	**1**	
13. Lambda	**1.03**	**0.25**	**0.50**	**1.63**	**0.04**	**0.11**	**0.13**	**0.33***	**0.35***	**-0.02**	**-0.07**	**0.15**	**-0.07**	**-0.36***	**-0.14**	**0.08**	**1**

N=80 firms. *95% significant

□[a] **Log transformed** □[b] **These variables have been constructed with a standardized variables, thus the only information available is in a standardized format.**

Table 2

Logistic regression results for timing of CEO replacement on turnaround success

	1	2	3	4	5	6
Altman Z-score	-0.22	-0.19	-0.23	-0.17	-0.24	-0.14
	(0.33)	(0.36)	(0.35)	(0.35)	(0.31)	(0.35)
Capital Intensity	-5.17	-6.65	-9.24	-7.96	-6.89	-3.30+
	(3.78)	(4.83)	(6.52)	(5.60)	(5.16)	(1.80)
Quick ratio	-0.26	-0.26	-0.23	-0.24	-0.20	-0.26
	(0.23)	(0.23)	(0.24)	(0.20)	(0.19)	(0.33)
CEO Tenure	-0.01	-0.07	-0.14	-0.24	-0.06	-0.09
	(0.32)	(0.33)	(0.31)	(0.35)	(0.34)	(0.36)
Retrenchment	0.79	0.96*	1.07*	0.95	0.99*	0.89*
	(0.46)	(0.49)	(0.53)	(0.49)	(0.48)	(0.50)
Munificence	-0.20	-0.27	0.13	0.26	-0.39	-0.31
	(0.32)	(0.33)	(0.46)	(0.37)	(0.39)	(0.32)
Dynamism	-25.36*	-25.23*	-26.00*	-29.58	-32.55*	-31.20*
	(10.93)	(10.82)	(12.96)	(11.36)	(11.90)	(12.50)
Industry performance	-0.00	-0.00	-0.00	-0.01	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Causes (dummy)	-2.24**	-2.60**	-2.43*	-2.41*	-2.17*	-2.57**
	(0.81)	(0.92)	(0.95)	(1.07)	(0.97)	(0.94)
Board Size	0.05	0.06	0.08	0.07	0.08	0.07
	(0.11)	(0.11)	(0.14)	(0.13)	(0.14)	(0.11)
CEO Duality	0.62	1.07+	0.91	1.16	1.12	0.30
	(0.64)	(0.62)	(0.66)	(0.66)	(0.69)	(0.69)
Lambda	-1.60	-1.73	-1.53	-1.43	-1.77	-1.97
	(1.29)	(1.32)	(1.33)	(1.43)	(1.50)	(1.33)

Time Dummies	Included	Included	Included	Included	Included	Included
Main effects						
Timing		-0.47	-0.27	-1.03**	-0.57	-0.59
		(0.27)	(0.3)	(0.37)	(0.65)	(1.33)
Interaction effects						
Timing X Munificence			**1.70**			
			(0.89)			
Timing X Causes (dummy)				**4.40****		
				(1.57)		
Timing X CEO Tenure					**-2.31****	
					(0.76)	
Timing X CEO Duality						**2.70***
						(1.24)
Constant	2.79	2.61	2.28	2.42	2.45	2.71
	(1.96)	(2.09)	(2.10)	(2.21)	(2.43)	(1.98)
Chi-squared statistic	23	25*	29**	32**	35**	30***
Number of observations	80	80	80	80	80	80

***p<0.00; **p<0.01; *p<0.05

Figure 2

Interaction Plot for Moderating Effect of Causes (dummy) on the Relationship between Timing and Turnaround Success

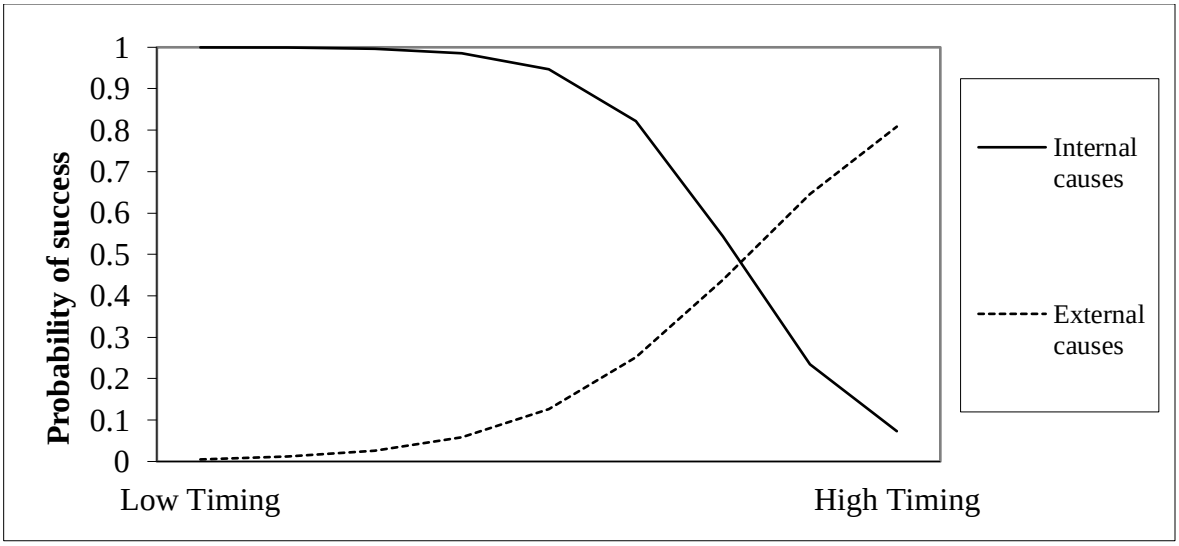


Figure 3

Interaction Plot for Moderating Effect of Tenure on the Relationship between Timing and Turnaround Success

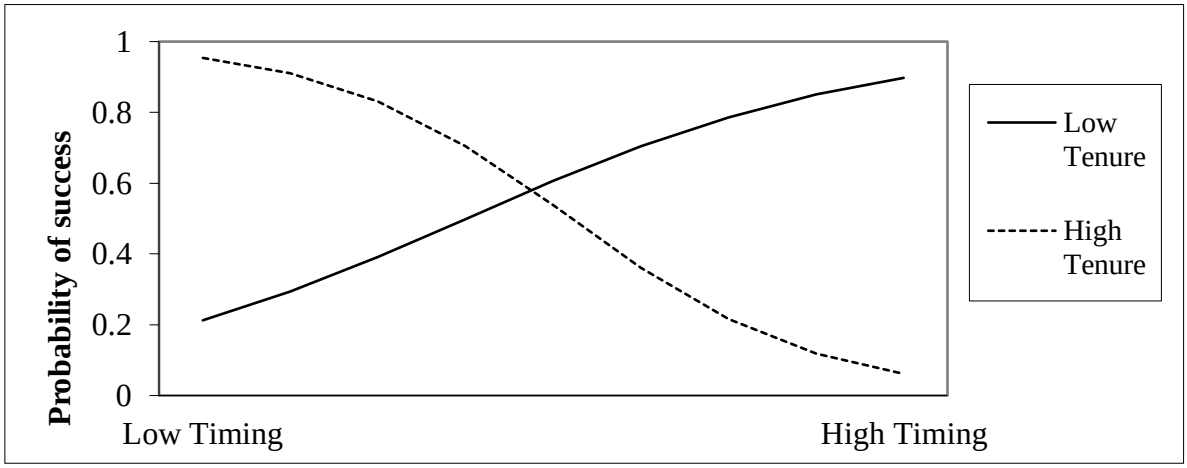
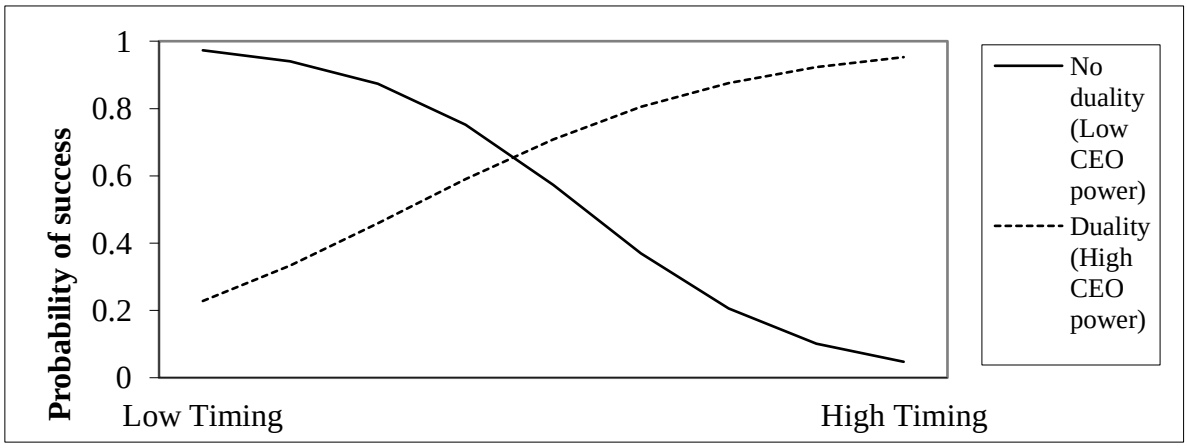


Figure 4

Interaction Plot for Moderating Effect of CEO Duality on the Relationship between Timing and Turnaround Success



FOURTH CHAPTER

THE MEDIATION OF VOLUME AGGRESSIVENESS ON TIME AGGRESSIVENESS IN RETRENCHMENT PROCESSES

1. Introduction

Traditional turnaround literature has suggested that turnaround performance resides in performing aggressive action, especially during the retrenchment process (Bibeault, 1982; Hofer, 1980; Pearce II and Robbins, 2008; Pearce II and Robbins, 1993; Robbins and Pearce, 1992). This idea of aggressive action has been developed and analyzed by more recent literature with promising results (J. Barbero, Martinez, & Moreno, 2019). This literature has introduced the concept of retrenchment aggressiveness and separated such into two dimensions: retrenchment volume aggressiveness and retrenchment time aggressiveness (hereinafter, volume aggressiveness and time aggressiveness). Volume aggressiveness refers to how deep the cuts in costs and assets inflicted onto the organization are. Time retrenchment aggressiveness deals with how early/late or slow/fast retrenchment actions are carried out. The twist taken by the turnaround literature by introducing the aggressiveness concept has highlighted and demonstrated the importance of time in a turnaround context, represented by time aggressiveness as a key element in the overperformance of a turnaround.

In our research, we delve deeper into the effects of time on turnaround success by studying further the retrenchment aggressiveness framework,

and develop further time aggressiveness. For such purpose, we use two perspectives widely used in the turnaround literature: the survivor syndrome perspective (J. Brockner, 1989; Joel Brockner, 1992; Joel Brockner, Grover, & Reed, 1987) and the downward spiral perspective (D'Aveni, 1990; D. Hambrick & D´Aveni, 1988). In this study, we hypothesize that volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance. There are a number of reasons why firms will delay retrenchment actions, mainly based on CEO commitments (D. C. Hambrick, Geletkanycz, & Fredrickson, 1993; D. C. Hambrick & Mason, 1984). But in essence, how shallow or deep the cuts in a retrenchment process are (volume aggressiveness), might be related to how early/late the retrenchment process is started (time aggressiveness). Also, volume aggressiveness might also be related to how slow/fast the retrenchment process is carried out (time aggressiveness). We depict our research mediation model in Figure I:

Insert Figure 1 here

To study this question we extract a sample of declining firms between the years 1990 and 2001 from the Compustat quarterly files. We limit our sample to those non-diversified manufacturing firms with more than 500 employees implementing retrenchment actions. Our research is designed to avoid both survival bias and selection bias (Ndofor, Vanevenhoven, and Barker, 2013; Tangpong et al., 2015; Trahms, Ndofor, and Sirmon, 2013). To avoid survival bias, based on turnaround success we match successful firms with unsuccessful ones (Ndofor et al., 2013; Tangpong et al., 2015). With a final sample of 264 firms, we perform a logit regression on our dichotomic dependent variable: turnaround performance (Ndofor et al., 2013; Tangpong et al., 2015; Trahms et al., 2013). In order to deal with selection bias, we perform a Heckman procedure in all our regressions to prevent bias between retrenching and non-retrenching firms (Heckman, 1979).

Our results are aligned with prior literature by confirming that time aggressiveness has a positive relationship with turnaround performance, while volume aggressiveness shows a negative relationship (J. Barbero et al., 2019). Per the focus of our research, we find that volume aggressiveness negatively mediates the positive relationship between time aggressiveness and turnaround performance.

In sum, by using retrenchment aggressiveness, we study retrenchment both from a volume and a time perspective. Our research simultaneously deals with both dimensions and indicates that time aggressiveness is the key to understanding volume aggressiveness. The evidence found confirms the importance of the scant but emerging literature studying time and turnarounds (J. L. Barbero, Di Pietro, & Chiang, 2017; J. Barbero et al., 2019; Tangpong et al., 2015). These results represent a continuation springboard for future research on turnarounds toward the study of time aggressiveness to keep unblocking the traditional controversy regarding how effective retrenchment actions are.

2. Theoretical background

Turnarounds and retrenchment aggressiveness

Turnaround research has developed a widely accepted two-stage turnaround model (Morrow, Johnson, & Busenitz, 2004; Robbins & Pearce, 1992). The model includes two stages - retrenchment and recovery – in order to achieve turnaround outcomes favorable. The recovery stage, the most strategic stage during which firms seek profitability and growth, has been less studied and offers an interest area of research. The focus of this research is the first stage, critical to the survival of a distressed organization: the retrenchment stage.

One key aspect and highly debated topic in turnaround research has been the value of retrenchment. Retrenchment can be defined as the deliberate elimination of assets and/or costs as a means of increasing firm efficiency (Lim, Celly, Morse, & Rowe, 2013). Hence, there are two types of retrenchment, asset retrenchment and cost retrenchment, as tools to reduce the impact of the conditions responsible for a firm´s financial downturn (Barker & Mone, 1994; Morrow et al., 2004; Robbins & Pearce, 1992). Traditional literature has studied the value of retrenchment with mixed results (Barker & Mone, 1994; Pearce & Robbins, 1993). Hence, research has focused on studying under what conditions should asset or

cost retrenchment be used (J. L. Barbero, Ramos, & Chiang, 2017; Lim et al., 2013; Morrow et al., 2004)

Turnaround research has lately been able to find support for the concept of aggressiveness, which was earlier developed by a strategic management stream of research studying the actions and reactions of competition. This stream developed the concept of aggressiveness by focusing on two main aspects of competition: the intensity and speed of actions and reactions of competing firms (M. J. Chen, Lin, & Michel, 2010; Ferrier, 2001; Ferrier, Smith, & Grimm, 1999; Konig, Kammerlander, & Enders, 2013). Turnaround research has been able to use this to develop the concept of retrenchment aggressiveness.

Traditional turnaround literature has consistently argued that a key idea to turnaround success is aggressiveness, hence turnarounds should be managed under aggressive action (Bibeault, 1982; Cascio, 1993; Shein, 2013; Whitney, 1987). More recent turnaround research has defined retrenchment aggressiveness as the volume of retrenchment action taken by declining firms over time (J. Barbero et al., 2019). This definition incorporates two main dimensions of the competition aggressiveness concept: the time and volume dimensions. Hence, retrenchment can be

analyzed by separating two aspects (dimensions) of retrenchment aggressiveness: volume aggressiveness and time aggressiveness. This twist in the turnaround conversations has shifted turnaround and retrenchment research from volume retrenchment considerations to time retrenchment considerations with promising results (J. L. Barbero, Di Pietro, et al., 2017; J. Barbero et al., 2019).

3. Hypotheses

Time aggressiveness and volume aggressiveness

Volume aggressiveness indicates the amount of retrenchment (the depth of the cuts) that distressed organizations carry out during the retrenchment process (J. Barbero et al., 2019). Evidence on the value of retrenchment has been dispersed. Some authors have shown evidence that declining firms using retrenchment measures achieve superior returns (Hambrick and Schecter, 1983; Hofer, 1980; Schendel, Patton, and Riggs, 1976; Zimmerman, 1991), regardless of the cause of decline (Robbins and Pearce, 1992). Other authors have found that volume aggressiveness does not offer performance benefits based on the dysfunctional effects on the firm's employees and culture (Barker et al., 1998) and the lack of strategic change (Barker III and Duhaime, 1997; Ndofor et al., 2013). Finally, some authors have suggested a curvilinear inverted U-shape relationship

between retrenchment and performance, given that extreme firm behavior - either inaction or hyper-action - leads to underperformance (Hambrick and D´Aveni, 1988), and one study found evidence of this shape (Schmitt and Raisch, 2013).

In the absence of moderators, most leading evidence points to a negative or no effect relationship between volume aggressiveness and firm performance (Lee and Goizueta, 1997; Nixon, Hitt, Lee, and Jeong, 2004) (Wayhan, 2000) (Cameron, Freeman, and Mishra, 1991) (Barker and Mone, 1994; Boyne and Meier, 2009; Castrogiovanni and Bruton, 2000). The survivor syndrome perspective supports the benefits of volume aggressiveness being likely to be reduced by the dysfunctional effects of the attitudes and behaviors of the remaining employees in response to retrenchment (Barker et al., 1998; Brockner, 1989; Morrison and Robinson, 1997). First, the remaining employees will probably be less committed as a result of a perceived lack of commitment by the organization itself (De Meuse, Bergmann, Vanderheiden, and Roraff, 2004; Morrison and Robinson, 1997). They are likely to incur in dissension due to a situation created by the management of the firm, and alien to them (Weitzel and Jonsson, 1989). Second, feelings of frustration, stress, anger and anxiety arise in the remaining employees given the lower number of employees left to perform

the increasing workload (Brockner, 1992; Brockner, 1988; Cameron et al., 1991). They will also feel guilty as they continue to have jobs while coworkers do not (Brockner, 1989). Finally, job insecurity leaves employees demoralized and demotivated, with the result of a part of the workforce will leave the firm (Brockner, 1992; Brockner, 1988). In sum, survivor syndrome perspective suggests lower employee morale and effectiveness prompted by volume aggressiveness will lead to turnaround underperformance. Thus, we propose

Hypothesis 1a: Retrenchment volume aggressiveness will negatively affect performance in turnarounds.

Time can greatly influence turnaround performance because, along with financial slack, is one of the two main elements of a successful turnaround (Hambrick and D´Aveni, 1988; Pearce and Robbins, 1993; Zimmerman, 1991). The organizational change stream of research has studied the concept and dimensions of time (Ancona, Goodman, Lawrence, and Tushman, 2001; Huy, 2001). Turnaround research has been able to use those ideas to define retrenchment time aggressiveness, as the time period between the onset of the decline process, to the execution of the retrenchment process (J. Barbero et al., 2019). This dimension of retrenchment has been broken down into two subdimensions: timing of

retrenchment, as the time period between the onset of the decline process and the start of the retrenchment process; and speed of retrenchment, as the time period between the onset of the retrenchment process and the execution of such process (J. Barbero et al., 2019).

The downward spiral is an influential turnaround stream arguing that decline is a continued process of resource erosion (Hambrick and D´Aveni, 1988). Decline acts as a process continuously eroding both internal resources (Hambrick and D´Aveni, 1988, 1992; Sutton, Eisenhardt, and Jucker, 1986) and external resources (Gilson, John, and Lang, 1990; Pajunen, 2006). For example, decline erodes financial, human and reputational resources (Barker III and Duhaime, 1997; Filatotchev and Toms, 2006; Gilson et al., 1990; Hambrick and D´Aveni, 1992; Pajunen, 2006). Then, time aggressive firms starting the retrenchment process early will be able to avoid an extended downward slide process and, consequently, avoid excessive resource deterioration. Similarly, based on survivor syndrome perspective, time aggressive firms executing an early retrenchment process will be able to avoid an extended period of decline and prevent employees from carrying excessive levels stress. Second, time aggressive firms implementing the retrenchment process fast will shorten the period of decline. A shorter period of decline will avoid excessive levels of resource deterioration and excessive levels of decline-induced stress on employees. To sum up, time aggressive firms, by avoiding excessive levels of resource

deterioration or excessive levels of managerial stress, will over-perform. As a result, we can state:

Hypothesis 1b: Retrenchment time aggressiveness will positively affect performance in turnarounds.

Mediation by volume aggressiveness between time aggressiveness and turnaround performance

As argued, the downward spiral stream posits that decline is a process which continuously depletes firm resources over time, and deteriorates both internal and external resources (D´Aveni & MacMillan, 1990; D. Hambrick & D´Aveni, 1988). First, less time aggressive firms initiating the retrenchment process later (timing) will find themselves in a worse state as the decline resource erosion process becomes more extended. As a consequence of their worse state, once they decide to act, they will need to be more volume aggressive to reverse a worse situation than the firm would have had if it had initiated retrenchment earlier. This, as argued earlier, leads the firm to underperform. Conversely, those time aggressive firms initiating retrenchment actions earlier will be able to avoid excessive levels of deterioration. A less deteriorated firm will need to introduce less deep, more shallow cuts, in this way becoming less volume aggressive. Less volume aggressive firms perform better.

Second, a more time aggressive firm carrying out the retrenchment process faster (speed) will shorten the period during which the firm is in decline. If the period of decline is shorter, the depletion of firm resources due to decline will be lower and the firm will be less deteriorated. A more time aggressive, less deteriorated firm will need to be less volume aggressive to conduct a turnaround which will lead it to perform better.

In summary, the effect of volume aggressiveness on performance is part of a sequence. In the first step, the degree of volume aggressiveness is determined by how early the retrenchment process starts or how fast the process is being executed. In the second step, volume aggressiveness determines performance. Therefore, we posit:

Hypothesis 2: Retrenchment volume aggressiveness mediates the relationship between retrenchment time aggressiveness and turnaround performance.

4. Methodology

Data and sample

In our study we drew a sample of established but declining firms implementing retrenchment processes. We sampled firms from the

Compustat database quarterly files and extracted declining firms between the years 1990 and 2001 and their effects on turnaround outcome six years later (Ndofor et al., 2013). We decided to leave out the period of economic crisis that began in 2008 from our analyses. A company in decline has been defined by prior turnaround literature as one that has two consecutive years of declining return on assets (ROA), after a base year with ROA greater than the risk free (Barker III and Duhaime, 1997; Ndofor et al., 2013). We measured the risk free rate with the 6 months US T-bill. We also required a negative ROA in the second year of decline (Barker III and Duhaime, 1997; Ndofor et al., 2013). Selected companies in our sample are characterized by employing more than 500 employees the base year, thus eliminating small and medium-sized enterprises (Lim et al., 2013). Also, we picked companies that derived at least 70 percent of their revenues from their primary three-digit SIC industry to avoid amalgamated financial data from diversified firms (Morrow et al., 2004; Tangpong et al., 2015). Finally we chose manufacturing firms, this is, firms operating in SIC industries 2000-3999 (Barker III and Duhaime, 1997; Morrow et al., 2004). The selection yielded a total of 433 companies.

Our object of analysis and study is the effects of retrenchment time aggressiveness and volume aggressiveness on the performance of declining firms. Therefore, we picked firms involved in asset or cost retrenchment processes. Firms involved in asset retrenchment are those

cutting total assets by more than 5% over the period of study (Lim et al., 2013) - a six-year period from the onset of decline. Firms involved in cost retrenchment are those firms reducing selling, general and administrative expenses (SGA) by more than 5% over the period of study. The selection yielded 347 companies, an 80.14 % of the total sample of companies.

Selection bias

Retrenchment decisions are not random and might be often endogenously linked to other organizational variables, hence there is a risk of sample selection bias. We implemented the Heckman procedure prior to the analysis (Ndofor et al., 2013; Tangpong et al., 2015) in order to control for such bias. In the first step, we ran a Probit analysis by regressing the retrenchment dummy (retrenchers = 1, otherwise 0) on organizational and industry variables. We used severity measured by reverse coding firm performance of the year before decline started (Chen and Hambrick, 2012), the level of distress (we used the firm's Altman Z-score), the quick ratio (measured as (current assets – inventories) / current liabilities), the firm's size (measured with the log of employees), leverage (measured with the ratio of long-term debt to total assets), the firm's ROA, the firm's age (the log of the period in years from the establishment of the company to the year prior to its decline), CEO change (a dummy variable measuring the company's CEO change during the two years of decline or the first year

of recovery) and year dummies. To successfully control for the selection bias, at least one independent variable needs to be identified that is associated with the dependent variable in the first-stage model, but is not related to the dependent variable in the second-stage model analysis. This variable is severity. This is highly correlated with the retrenchment dummy variable, but very little correlated with the independent variable in the model - performance turnaround. An inversed Mills ratio was generated in the first-stage model, and then included in the second-stage analysis as an instrumental variable (lambda) to correct for any selection bias (Heckman, 1979). The overall results are not significantly altered, suggesting that endogeneity is not a major concern, since the lambda variable is not significant in the analysis model. After having considered the treatment of selection bias using lambda as a variable for control, we are left with the sample of 347 companies carrying out retrenchment actions. The model (lambda) has a log-likelihood of -183.86 ($p<0.001$) and a pseudo R-squared of 0.08.

Survival bias

Within this group of 347 retrenching companies, some are successful in turning around and others are not. We considered a successful turnaround those firms who (1) have at least two years of increasing its ROA after its two years of decline, and (2) have achieved and maintained a positive ROA by at least the sixth year after the base year before its decline started

(Ndofor et al., 2013). In the group of unsuccessful firms, some of them stopped reporting results in Compustat, hence they were classified as unsuccessful (Ndofor et al., 2013). Of the firms that were classified as non-successful, several patterns of performance existed (Ndofor et al., 2013). First, some firms continued in existence but failed to achieve or maintain the upturn in their ROA necessary to be classified as a turnaround firm. Second, firms that stopped reporting results on Compustat after declining were investigated. If these firms declared bankruptcy, were liquidated, delisted by stock exchanges, or acquired while still unprofitable, we classified them as nonturnarounds. This inclusion of firms that went bankrupt or disappeared after declining addresses one of the key criticisms of sample selection in turnaround studies: survival bias (Barker and Mone, 1994).

To test our hypotheses and avoid survival bias, we used a matched-pairs sampling technique that is common in turnaround studies (Chen and Hambrick, 2012; Tangpong et al., 2015). To do so, we used Propensity score matching by employing the Stata code psmatch2. We needed to identify comparison targets between successful and unsuccessful companies. The variables used to calculate the Propensity score matching were the level of distress, the current ratio, the quick ratio, the firm's size, the firm's ROA, the sales growth (measured by the sales growth between the year of the decline and the prior year) and year dummies. The model has a log-

likelihood of -190.23 ($p<0.1$) and a pseudo R-squared of 0.10. These statistics indicate the appropriateness of the choice of independent variables and the overall fit of our model. Our final sample size was 264 firms, based on the match of 132 unsuccessful firms with 132 successful firms. This sample size is reasonable compared to prior turnaround studies using matched-pairs sampling (Ndofor et al., 2013; Tangpong et al., 2015). The procedure used is valid for the final sample testing of the hypotheses.

All the variables were collected from the Compustat North American Database, except for the agency variables (CEO change and board size). These variables were extracted from the annual reports and proxy statements in the Edgar database (U.S. Securities and Exchange Commission).

Measurement

Dependent variable

To test our hypotheses we used a dummy variable. Our dummy variable is turnaround performance and indicates whether the firm was successful in turning around, as described in the "survival bias" section. The dummy variable was coded as '1' for a successful turnaround and '0' for an unsuccessful turnaround (Hambrick and D´Aveni, 1992; Ndofor et al., 2013; Tangpong et al., 2015).

Independent variables

There are two independent variables in our study: time aggressiveness and volume aggressiveness (Nadkarni, Chen, & Chen, 2016). Time aggressiveness is calculated as the sum of the timing of the retrenchment and the speed of the retrenchment. The timing of the retrenchment is instrumentalized by standardizing and adding the timing of asset retrenchment and the timing of cost retrenchment. The speed of retrenchment is instrumentalized by standardizing and adding the speed of asset retrenchment and the speed of cost retrenchment. The timing of asset retrenchment and cost retrenchment are instrumentalized as the number of quarters spanning the quarter in which asset retrenchment or cost retrenchment is initiated and the last quarter of the base year. Second, the speed of asset retrenchment and the speed of cost retrenchment is instrumentalized as the number of quarters between the initiation of the retrenchment process (timing) and the time period in which the firm reached 80% of the total amount retrenched during the six-year study period.

Volume Aggressiveness is generated as the sum of the standardized values of asset retrenchment and cost retrenchment. Asset retrenchment and cost retrenchment are generated as the reduction of assets (total

assets)/reduction of costs (SGA) in the six- year period. To facilitate the interpretation of the coefficient sign for time aggressiveness, we reverse-coded the variable, so that greater coefficients indicate a greater degree of time aggressiveness.

Control variables

We used the level of distress, the firm's size, the capital intensity (the fixed assets divided by the number of employees), the firm's age, CEO change, Board size (the number of members on the board of directors). We also included a proxy for causes of decline to determine whether the decline had a firm or environmental nature (Causes of decline). Its calculation is given by the expression ROA sector (year 1) - ROA firm (year 1) (Chen, 2014). The inverse Mills ratio (lambda) and temporal dummies are also introduced in the analysis models.

5. Results

Table I shows the descriptive statistics and correlations for all variables used in our model (excluding time dummies and lambda). Table II reports the results for our analyses.

Insert Tables 1 and 2 here

To test hypotheses 1a and 1b, we used binary logistic regression analyses. To test hypothesis 2, we employed binary logistic regression and OLS. Model 1 is the control model for hypotheses 1a, 1b and 2. Model 5 is also the control model for hypothesis 2. Model 2 presents the results for testing hypothesis 1a and confirms it ($\beta = 0.31$, $p < 0.01$) having a positive and significant coefficient. To test hypothesis 1b, we estimated Model 3, confirming it ($\beta = -0.44$, $p < 0.01$) as negative and having a significant coefficient. Based on these results hypotheses 1a and 1b are confirmed.

Hypothesis 2 argues that volume aggressiveness mediates the relationship between time aggressiveness and turnaround performance. A mediation effect requires three conditions (Baron and Kenny, 1986; MacKinnon, Fairchild, and Fritz, 2007). First, the independent variable must have a significant effect on the dependent variable. Model 2 provides support for this condition. Second, the mediator must be explained by the independent variable. Model 6 upholds this condition ($\beta = -0.19$, $p < 0.01$). Third, the mediator variable must have a significant effect on the dependent variable after the effect of the independent variable is controlled for. As part of this condition, it is also necessary for the coefficient

associated with the independent variable to decrease. Model 4 supports this condition ($\beta = 0.24$, $p < 0.01$). We also performed a Sobel test (Sobel, 1982) on the model with significant results ($Z = 2.23$; $p < 0.05$). The results of the mediation analysis uphold partial mediation because entering volume aggressiveness reduces the strength of the effects of time aggressiveness on turnaround performance (from $p < 0.01$ to $p < 0.05$).

6. Discussion

Our study deals with time in a turnaround context. We use the downward spiral (D´Aveni & MacMillan, 1990; D. Hambrick & D´Aveni, 1988) and the survivor syndrome perspectives (J. Brockner, 1989; Joel Brockner, 1992; Joel Brockner et al., 1987)to study the two dimensions of retrenchment aggressiveness: time and volume aggressiveness. The very focus of our study is to find out whether volume aggressiveness mediates the relationship between time aggressiveness and turnaround success. As a byproduct, we also independently analyze the effects of time aggressiveness and volume aggressiveness on the performance of declining firms.

Our main contribution is the confirmation that volume aggressiveness mediates the relationship between time aggressiveness and turnaround success. As secondary findings, we were also able to confirm that time aggressiveness influences positively on turnaround success, while volume aggressively influences negatively.

Our results are in line with recent studies arguing the path dependent pattern of the retrenchment-turnaround relationship (J. Barbero et al., 2019; Tangpong et al., 2015). Retrenchment has a path dependent pattern toward turnaround performance. Our results contribute to the pattern by showing evidence of how the pattern is staged in two steps. In the first step,

time aggressiveness is an antecedent of volume aggressiveness. In the second step, volume aggressiveness is an antecedent to turnaround performance. In sum, the pattern has an antecedent - time aggressiveness - is mediated by volume aggressiveness and has an effect on turnaround performance.

As a practical implication for investment managers and chief restructuring officers, we advise that if they decide to acquire or get involved in the turnaround of a firm, they should think twice to get involved in firms that have been in decline for some time and no retrenchment action has been taken yet. The mediation of volume guarantees that the effort to turn those firms around will be much greater, as the amount of volume aggressiveness on will need to be higher. Also, possibly the likelihood of turning around those firms will be lower for all the reasons stated above in line with the survivor syndrome perspective and negative attitude of the workforce, mainly, increased stress over the remaining and a reluctance to cooperate in the turnaround by the workforce

7. Limitations and future lines of research

A major concern in turnaround studies is control over environmental/firm-based decline. This type of control has been the major criticism of authors. Over the years, the literature has struggled to find an effective form of

control. Unfortunately, in a non-questionnaire research design, the control of the causes will always be a limitation. In our research we have included a type of control for the kind of decline - industry profit growth - although a better form of control would have been desirable.

Finally, the test of our hypotheses, a sample of service industry firms would be advisable. Most of the turnaround research has used samples of manufacturing firms (Barker & Duhaime, 1997; Robbins & Pearce, 1992), and so have we in this study. Service firms are characterized by lower asset intensity and larger payrolls. This type of firms have the right traits to test hypotheses, which similar to our study, are argued on the basis of the survivor syndrome perspective.

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Figure 1: Conceptual model

MEDIATION VOLUME AGGRESSIVENESS OVER TIME AGGRESSIVENESS

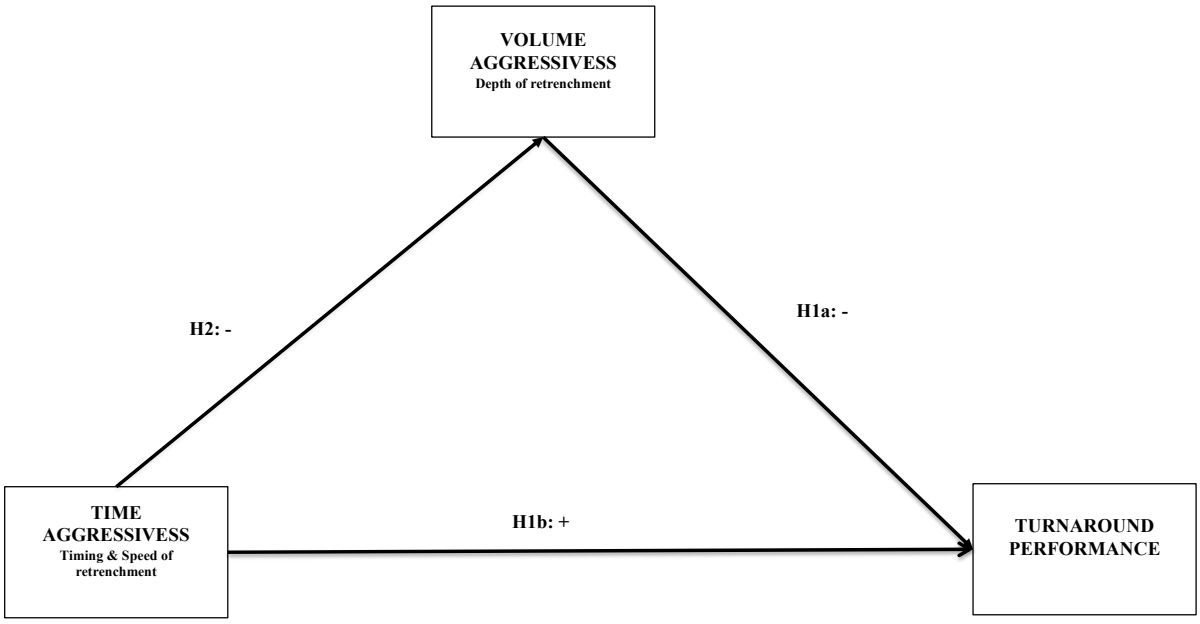

Table1. Descriptive Statistics and Correlations

Variable	*M*	*SD*	Min	Max	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Turnaround Performance	**0.50**	**0.50**	**0.00**	**1.00**	**1**									
2. Time Aggressiveness [b]	**0.00**	**1.20**	**-4.92**	**3.39**	**0.17***	**1**								
3. Volume Aggressiveness [b]	**0.00**	**1.27**	**-2.52**	**6.34**	**-0.19***	**-0.22***	**1**							
4. Z-score	**3.75**	**2.80**	**-3.59**	**18.94**	**-0.05**	**-0.03**	**-0.13***	**1**						
5. Employees [a]	**5.65**	**10.61**	**0.50**	**88.5**	**-0.03**	**-0.03**	**-0.18***	**-0.08**	**1**					
6. Capital Intensity	**0.07**	**0.08**	**0.01**	**0.62**	**-0.00**	**0.05**	**-0.15***	**0.01**	**-0.02**	**1**				
7. Age [a]	**3.27**	**1.03**	**0.00**	**5.28**	**0.16***	**0.01**	**-0.11**	**-0.18***	**0.25***	**-0.07**	**1**			
8. CEO Change	**0.69**	**0.46**	**0.00**	**1.00**	**0.05**	**-0.03**	**-0.05**	**-0.03**	**-0.01**	**0.05**	**0.06**	**1**		
9. Board Size	**9.19**	**3.29**	**3.00**	**21.00**	**-0.07**	**0.04**	**-0.19***	**-0.13***	**0.30***	**0.07**	**0.13***	**0.02**	**1**	
10. Causes of decline	**-28.00**	**121.74**	**-693.6**	**1650.61**	**-0.12**	**-0.01**	**0.03**	**-0.08**	**-0.05**	**0.03**	**0.03**	**0.05**	**-0.10**	**1**

N=264 firms. ^{a} **Log transformed.** ^{b} **These variables have been constructed with standardized variables.**

Table 2 Results of regression analyses

	DV: Turnaround performance (1-4) DV: Volume aggressiveness (5-6)					
	1	**2**	**3**	**4**	**5**	**6**
Control variables						
Z-score	-0.01	-0.01	-0.05	-0.04	-0.07*	-0.07**
	(0.05)	(0.06)	(0.06)	(0.06)	(0.03)	(0.07)
Employees [a]	-0.02	-0.01	-0.02	-0.02	-0.01**	-0.01**
	(0.02)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)
Capital Intensity	1.21	0.91	0.05	-0.13	-2.63**	-2.43**
	(1.73)	(1.71)	(1.69)	(1.69)	(0.83)	(0.80)
Age [a]	0.36*	0.36*	0.32*	0.33*	- 0.13	0.12
	(0.16)	(0.16)	(0.15)	(0.16)	(0.08)	(0.08)
CEO Change	0.17	0.21	0.08	0.13	-0.19	-0.21
	(0.30)	(0.30)	(0.31)	(0.31)	(0.17)	(0.16)
Board Size	-0.06	-0.07	-0.09*	-0.10*	-0.07*	-0.06*
	(0.05)	(0.05)	(0.05)	(0.05)	(0.03)	(0.26)
Causes of decline	-0.01	-0.01	-0.01+	-0.01+	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Lambda	0.06	-0.12	0.49	-0.55	-1.12	-0.99
	(1.04)	(1.03)	(1.14)	(1.12)	(0.69)	(0.67)
Time (year) dummies	Included	Included	Included	Included	Included	Included
Main effects						
Time Aggressiveness		**0.31****		**0.24***		**-0.19****
		(0.12)		**(0.12)**		**(0.07)**
Volume Aggressiveness			**- 0.44****	**- 0.40****		
			(0.15)	**(0.15)**		
Constant	0.06	0.01	0.77	0.66	2.61	2.42**
	(0.98)	(0.98)	(0.97)	(0.98)	(0.77)	(0.72)
Pseudo R-squared	9.6+	11.48*	12.98*	14.11***	17.44***	20.54***
Number of observations	264	264	264	264	264	264

***p<0.00; **p<0.01; *p<0.05;+p<0.1

FIFTH CHAPTER

SUMMARY AND CONCLUSIONS, CONTRIBUTIONS, LIMITATIONS AND FUTURE RESEARCHES

1. Summary and conclusions

With this dissertation we have contributed to help turnaround research align to three critical contemporary topics of research, which have allowed progress in other management areas. Retrenchment is one of the most important and most studied topics in the turnaround literature and we have studied three partial aspects of retrenchment, which are critical to the development of the area. These three topics, dynamic capabilities, CEO succession and time dimensions are very relevant to the retrenchment stage and to turnaround management.

The dissertation will allow the extension of turnaround research towards the dynamic capabilities perspective, an area that has been very developed during the last two decades and that has allowed the advance of other management areas with great results. In the dissertation, we also address CEO change a very important topic in turnarounds which prior research has covered in an underspecified fashion. Finally, the dissertation also confirms the role of time in a turnaround setting. This idea has been proposed and suggested by recent studies, and our contribution confirms the idea of time as a critical topic to turnaround success, reducing more any trace of mixed evidence, a trait very common in retrenchment literature. These three critical topics have either not been studied or have been scantly developed in turnaround research.

2. Contributions

In the first study, we find that retrenchment actions are part of the set of dynamic capabilities that literature has previously tested. We confirm that one of the most change demanding situations in business is decline and that retrenchment, a type of action required in turnaround settings, should be part of the dynamic capabilities set of capabilities. We also find that not all retrenchment capabilities have a similar effect on turnaround performance: the degree of leverage of asset retrenchment in situations of dynamism is greater. Thus, asset retrenchment is more a "dynamic" capability than cost retrenchment. This contribution is the first one opening the dynamic capabilities perspective to the study of turnaround and retrenchment.

In our second study, we have found that in a turnaround setting, an early CEO replacement does not always guarantee superior performance. This idea has been pervasive over the year in the turnaround literature. We find that the timing depends on the specifics of the situation. We focus our attention in three variables influencing positively this relationship. We find that CEOs should be replaced early under internal causes of decline and under a long CEO tenure. We also found that CEOs should be replaced late in the presence of duality. These findings represent three main contributions to the management literature. First, we contribute specifiying the circumnstances under which CEO replacement is effective in situations of decline. Second, we help reinforce the importance of the external/internal causes of decline idea in

turnarounds. This is needed given how overlooked the topic of causes of decline has been in the literature. Finally, our research validates the idea of unity of command, and suggesting the negative effects of duality claimed by the theory of agency does not hold in turnaround situations.

Finally, our third study deals with time in a turnaround context. We use the downward spiral (D´Aveni & MacMillan, 1990; D. Hambrick & D´Aveni, 1988) and the survivor syndrome perspectives (J. Brockner, 1989; Joel Brockner, 1992; Joel Brockner et al., 1987) to find out whether volume aggressiveness mediates the relationship between time aggressiveness and turnaround success. As a byproduct, we also independently analyze the effects of time aggressiveness and volume aggressiveness on the performance of declining firms. Our main contribution is the confirmation that volume aggressiveness mediates the relationship between time aggressiveness and turnaround success. As secondary findings, we were also able to confirm that time aggressiveness influences positively on turnaround success, while volume aggressively influences negatively.

3. Limitations and future lines of researches

Our dissertation has a number of limitations. The domain of our study is limited to the retrenchment stage and the retrenchment actions. Our research should be replicated to the recovery stage, as the topic

covered in the three studies are core to this stage. Specifically, we believe our study on dynamic capabilities is very relevant to the recovery stage, a stage in which the firm strategy is a primary driver in management decision-making.

We also find that our research has centered on studying larger firms: The firms in our sample possess a minimum of 250 employees. Firm mortality is exponential as firm size is decreased. Thus, we feel that the turnaround literature should also study turnarounds and retrenchment of small and medium size firms. Our research should be extended to the below 250 employee firm. However, we also concur that a minimum threshold size is required and retrenchment in firms below the 10/20 employee has little leverage.

Also as future lines of research, there are some areas that future studies should address. One of the recent lines of research within dynamic capabilities is orchestration. Orchestration broadly deals with the timing and the combination of actions required to improve firm performance or generate a competitive advantage. It is our belief that asset retrenchment and cost retrenchment is a valid topic of study from an orchestration perspective. In other words, the timing and combination of asset retrenchment/cost retrenchment will provide insights to researchers and practitioners.

As argued, there is a close relationship between strategy and retrenchment. Through the retrenchment actions, a firm will determine

some aspects of its strategy, specifically those related to the negative part of the strategy ("what not to do"). This idea is very important and should be investigated further. Specifically, future researchers should study the contribution of the retrenchment actions to the firm strategy and to the business model formation.

Finally, the study of the timing of CEO replacement only covers the replacement of the top firm position. CEO replacement will likely concatenate a number of management team exits and new incorporations. These dynamics should be the subject of future studies, as our research has been limited to the top executive substitution.

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SIXTH CHAPTER

SPANISH SUMMARY

1. Resumen y conclusiones

Con esta tesis, hemos contribuido a que la investigación sobre reestructuraciones se alinee con tres temas de investigación críticos, que también permitirá el progreso en otras áreas de investigación. La etapa de saneamiento o recortes es uno de los temas más importantes y más estudiados en la literatura de reestructuración, y se han estudiado tres aspectos parciales de la misma, que son críticos para el avance de este área. Estos tres temas son: las capacidades dinámicas, la sucesión del Director General y las dimensiones temporales en la etapa de recortes.

La tesis permitirá extender la investigación de las reestructuraciones hacia la perspectiva de las capacidades dinámicas, un área que ha tenido un gran desarrollo durante las últimas décadas y que ha permitido el avance en otras áreas de gestión, con buenos resultados. En la tesis, también abordamos el cambio del CEO, un tema muy importante en las reflotaciones, que la investigación hasta la fecha lo ha cubierto de manera poco específica. Finalmente, nuestro estudio también confirma el papel del tiempo en un escenario de cambio. Esta idea ha sido propuesta y sugerida por estudios recientes, y nuestra contribución confirma la idea de que el tiempo es un tema crítico para el éxito de la recuperación, reduciendo las dudas existentes que han sido planteadas por la literatura anterior. Estos tres temas críticos no han

sido estudiados o se han desarrollado de manera muy preliminar por los anteriores trabajos de investigación.

2. Contribuciones

En el primer trabajo, encontramos que las acciones de saneamiento son parte del conjunto de capacidades dinámicas. Confirmamos que una de las situaciones que más cambio exige en los negocios es el declive y que los recortes, un tipo de acción requerida cuando se trata de reflotar una empresa, debe ser parte del conjunto de capacidades dinámicas. También encontramos que no todas las acciones de recortes tienen un efecto similar en el desempeño de la recuperación: el grado de influencia que tiene la reducción de activos en situaciones de dinamismo es mayor. Por lo tanto, la reducción de activos es una capacidad más "dinámica" que la reducción de costes. Nuestro trabajo es el primero que abre la perspectiva de las capacidades dinámicas al estudio de la reestructuración de empresas.

En nuestro segundo estudio, descubrimos que en un contexto de reestructuración, un reemplazo temprano del Director General no siempre garantiza un resultado mejor. Esta idea ha sido recurrente en la literatura de reestructuraciones. Encontramos que el momento del reemplazo del CEO depende de las circunstancias de la situación. Hemos centrado nuestra atención en tres variables que influyen en esta relación. Encontramos que el Director General debe ser reemplazado lo

antes posible si nos encontramos ante causas internas de declive y bajo un mandato prolongado del mismo. También encontramos que los Directores Generales deben ser reemplazados más tarde en presencia de dualidad. Estas conclusiones de nuestra trabajo suponen tres contribuciones a la literatura. En primer lugar, contribuimos a especificar las circunstancias en las que la sustitución rápida del CEO es efectiva en situaciones de declive. En segundo lugar, ayudamos a reforzar la importancia de las causas externas/internas de declive en las reestructuraciones. Esto es necesario dado que el tema de las causas del declive se ha pasado por alto en la literatura. Finalmente, nuestra investigación valida la idea de la unidad de mando y sugiere que los efectos negativos de la dualidad, establecidos por la teoría de la agencia, no se sostienen en situaciones de declive.

Finalmente, nuestro tercer estudio trata sobre el tiempo en un contexto de cambio. Usamos la teoría de la espiral descendente (D´Aveni & MacMillan, 1990; D. Hambrick & D´Aveni , 1988) y la perspectiva del síndrome del superviviente (J. Brockner , 1989; Joel Brockner , 1992; Joel Brockner et al., 1987) para investigar si la agresividad del volumen media la relación entre la agresividad del tiempo y el éxito de la reflotación. También analizamos de forma independiente los efectos de la agresividad del tiempo y la agresividad del volumen en el resultado de las empresas en declive. Nuestra principal contribución es la confirmación de que la agresividad del volumen media la relación entre

la agresividad del tiempo y el éxito. Como hallazgos secundarios, también hemos podido confirmar que la agresividad del tiempo influye positivamente en el éxito de la reestructuración, mientras que la agresividad del volumen influye negativamente.

3. Limitaciones y futuras líneas de investigación

Nuestra tesis tiene una serie de limitaciones: en primer lugar, se centra únicamente en la etapa de saneamiento y en las acciones de recortes. Nuestra investigación debe repetirse para la etapa de recuperación, ya que el tema cubierto en los tres estudios es fundamental también para esta segunda etapa. Específicamente, creemos que nuestro estudio sobre capacidades dinámicas es muy relevante para la etapa de recuperación, una etapa en la que la estrategia de la empresa es un factor principal en la toma de decisiones.

Por otro lado, nuestra investigación se ha centrado en estudiar empresas grandes: las empresas de nuestra muestra poseen un mínimo de 250 empleados. La mortalidad empresarial es exponencial a medida que disminuye el tamaño de la empresa. Por lo tanto, creemos que la literatura sobre esta materia también debería estudiar las reestructuraciones de las pequeñas y medianas empresas. Nuestra investigación debería extenderse a las empresas de menos de 250 empleados. Sin embargo, también coincidimos en que el estudio lo

aconsejaríamos a partir de un cierto tamaño, ya que la etapa de saneamiento en empresas con menos de 10/20 empleados tiene poca influencia.

También como futuras líneas de investigación, existen algunas áreas que futuros estudios deberían abordar. Una de las líneas de investigación recientes dentro de las capacidades dinámicas es la orquestación. La orquestación se ocupa en términos generales del momento y la combinación de acciones necesarias para mejorar el desempeño de la empresa o generar una ventaja competitiva. Creemos que la reducción de activos y la reducción de costes es un tema de estudio válido desde una perspectiva de orquestación. En otras palabras, el momento y la combinación de reducción de activos/reducción de costes proporcionarán información a investigadores y profesionales.

Como se ha argumentado, existe una estrecha relación entre la estrategia y la etapa de saneamiento. A través de las acciones de recortes, una empresa determinará algunos aspectos de su estrategia, específicamente aquellas relacionadas con la parte negativa de la estrategia (qué no se debe hacer). Esta idea es muy importante y debe ser investigada más a fondo. En concreto, los futuros investigadores deberían estudiar la contribución de las acciones de saneamiento a la estrategia de la empresa y a la formación del modelo de negocio.

Finalmente, el estudio del momento del reemplazo del CEO solo cubre el reemplazo del puesto más alto de la empresa. El reemplazo del CEO

probablemente concatene una serie de salidas del equipo de gestión y nuevas incorporaciones. Estas dinámicas deberían ser objeto de futuros estudios, ya que nuestra investigación se ha limitado a la sustitución del más alto ejecutivo.