

FrancoAngeli

IL GOVERNO AZIENDALE TRA TRADIZIONE E INNOVAZIONE

**a cura di
Luciano Marchi
Rosa Lombardi
Luca Anselmi**



**Società Italiana di Ragioneria
e di Economia Aziendale**

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VI

STRATEGIE DI SVILUPPO, RISANAMENTO E COOPERAZIONE



Società Italiana di Ragioneria e di Economia Aziendale

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INTRODUZIONE

Rosa Lombardi

La pianificazione e l'attuazione delle strategie aziendali da parte del management societario comportano l'assunzione di molteplici decisioni volte a raggiungere uno o più obiettivi specifici e a dare un ruolo all'impresa rispetto allo scenario in cui vive e opera.

A partire dallo studio del comportamento delle aziende e dei processi di decisione, esecuzione, controllo e feedback, la definizione di una strategia aziendale si concretizza a seconda dell'orientamento imprenditoriale e della disponibilità a cogliere i vantaggi del mercato nel caso di espansione, risanamento e cooperazione aziendale, grazie anche all'utilizzo di risorse strategiche e di strumenti adeguati di gestione.

Da qui, la strategia aziendale può essere riformulata in qualsiasi momento della vita dell'impresa, tanto più in condizioni di squilibrio economico-finanziario associate alla crisi d'impresa e al suo stadio, ovvero a cause interne (ad esempio, difficoltà ad assumere decisioni, incapacità di offrire prodotti innovativi, squilibri finanziari) ed esterne (ad esempio, presenza sul mercato di prodotti a prezzi concorrenziali, riduzione dei consumi, modifica dei gusti del consumatore) al sistema aziendale.

In questa direzione, gli articoli raccolti nella presente sezione del volume investigano tematiche significative connesse, da un lato, alle strategie e, dall'altro lato, a particolari momenti della vita aziendale, quali sono la fase di sviluppo, di risanamento e di cooperazione aziendale.

Nel primo articolo dal titolo "Vantaggi competitivi e governance dei distretti: un'opportunità per le strategie di back-reshoring", Antonio Ricciardi, Patrizia Pastore e Silvia Tommaso si pongono l'obiettivo di evidenziare quali sono i vantaggi competitivi offerti dai distretti industriali nel promuovere l'implementazione di strategie sia di back-reshoring per le aziende nazionali, sia di near-shoring per le multinazionali con sede all'estero.

Nel secondo articolo dal titolo "Il fenomeno delle startUP in Italia: innovazione e nuove imprenditorialità", Alessandro Capocchi e Paola Saracino analizzano il tema del rapporto tra innovazione e nuove imprenditorialità. Mediante l'osservazione del fenomeno in Italia, gli Autori intendono sia comprendere l'impatto derivante dalla nascita delle startup sul sistema economico, sia proporre una metodologia di analisi del fenomeno per il monitoraggio e la definizione di nuove imprenditorialità.

Nel terzo articolo dal titolo “Social Impact Investments: social and financial returns related to risks. A theoretical approach”, Valter Cantino, Alain Devalle e Simona Fiandrino affrontano il tema degli investimenti ad impatto sociale (social impact investments), proponendo un’analisi della letteratura e analizzando i metodi di misurazione esistenti per tali investimenti. La finalità degli Autori è di fornire un approccio volto a sviluppare un modello formale di misurazione dell’impatto sociale collegato agli investimenti, tenendo presente sia i rischi finanziari, sia i rischi sociali.

Il quarto articolo dal titolo “Business administrative systems and bankruptcy financial distress”, realizzato da Angelo Paletta, Genc Alimehmeti e Alberto Tron, esplora le caratteristiche del sistema amministrativo aziendale e i suoi effetti diretti e indiretti sulla gravità e sulla durata del fallimento aziendale. Gli Autori assumono, attraverso un’analisi empirica, che le aziende con sistemi amministrativi più evoluti siano in grado di mitigare gli effetti economici e finanziari del fallimento, riducendo il livello di debito e il deficit di capitale in proporzione al capitale investito.

Nel quinto articolo dal titolo “Insolvency prediction models as a tool for a stakeholders view: an empirical study in Italy”, Elisa Giacosa, Alberto Mazzoleni, Claudio Teodori e Monica Veneziani si pongono l’obiettivo di verificare l’efficacia del modello di previsione dell’insolvenza aziendale maggiormente diffuso in letteratura. Attraverso l’analisi di un campione di aziende italiane, gli Autori suggeriscono di integrare il modello di Altman con un nuovo modello di allarme dell’insolvenza aziendale (“alert model”) utile sia per i vari stakeholder aziendali, sia per comparare l’efficacia di quest’ultimo modello rispetto al primo.

Nel sesto articolo dal titolo “Economicità e disabilità: un connubio possibile? Il governo inclusivo dell’azienda per un’economia e una società inclusive”, Guido Migliaccio affronta il tema della disabilità nell’ambito degli studi economico-aziendali, proponendo sia una disamina delle motivazioni a sostegno della sua rilevanza, sia l’analisi di alcuni aspetti chiave legati ai profili economici della disabilità, al governo e ai sistemi informativi aziendali. L’Autore interpreta altresì la disabilità nell’ambito delle prospettive legate ai glocalismi e alle società inclusive.

BUSINESS ADMINISTRATIVE SYSTEMS AND BANKRUPTCY FINANCIAL DISTRESS

Angelo Paletta¹, Genc Alimehmeti², Alberto Tron³

1. Introduction

Business Administrative Systems (BAS) is commonly considered to be a condition that improves the economic efficiency of firms. Literature considers BAS as a set of tools, methods and structures that support management in the *continuum* of decision-making, monitoring and reporting. It includes, therefore, planning and control (plans, *budget*, cost accounting, *reporting*), financial analysis and management (cash and credit management, investment, funding), organizational arrangements (organization charts, job descriptions, operative procedures, etc.) and the organizational structure of the CFO function (Anthony et al., 1998, Merchant and Van der Stede, 2007, Chenhall, 2003). The arguments about the positive effects of BAS have been developed largely with reference to either healthy companies or companies in crisis that thanks to the most advanced management systems able to anticipate the effects of crises by launching successfully a restructuring process (McKinley et al., 2013). However, we have little knowledge on the role of BAS in companies in bankruptcy.

The objective of research is to begin to fill this gap by analyzing the effect of BAS on the severity of the damage (Trahms et al., 2013). Particularly we analyze the characteristics of the BAS and its indirect and direct effects over the failure severity and durability. According to the extant literature we expect that companies with more evolved BAS are more durable and mitigate the economical and financial effects of bankruptcy, reducing the level of debt in proportion to the invested capital. The effects of more evolved BAS can be assumed as direct and indirect, given the propensity to start a turnaround process and the debt restructuring of the company.

Extant literature has shown that management control systems are explanatory factors of *turnaround* projects (Anthony et al., 1998, Merchant and Van der Stede, 2007, Chenhall, 2003, Bastia et al., 2011). In more

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advanced systems, this phenomenon coincides with a greater propensity to engage in a process of reorganization (D'Orazio et al., 2015). However, the fact that this paper focuses only on bankrupt companies, demonstrates the problem related to the outcomes of recovery attempts, or rather the intrinsic risk in cases where such transactions are not successful, implying the possibility to increase the negative effects of bankruptcy (Morrow, 2004, Dichev, 1998).

Therefore, the research question is that BAS is a relevant explanatory variable of the effects of corporate failure. There are opposing arguments that make it reasonable to assume either it is a factor of aggravation of the crisis or an attenuation effect. While it is possible to hypothesize a direct effect (not least for reasons of fraudulent accounting) in troubled companies, the effect on the severity of the crisis can also be indirect through the *turnaround* actions taken by companies trying to escape the crisis.

In order to empirically test this research question, the survey conducted in 2011 by the Observatory on Corporate Crisis (OCI) in relation to the verification of the passive state of bankrupt companies provides original evidences. The survey contains the profiles of governance and management of bankrupt companies, as well as the causes and circumstances of the distress, including previous recovery attempts by the companies (Bastia et al., 2011).

The paper is structured as follows. In the next section is presented the analysis of the literature on business failure with emphasis on the turnaround processes and the role of Business Administrative Systems. So it is developed the theoretical framework that guided the empirical investigation, with the description of the variables and the analysis model. Followed by search results and conclusions.

2. Reorganization strategies and administrative systems

The information related to the inefficient execution of corporate strategies must lead to reflect on the importance of implementation of strategy itself.

Without a valid support of evaluation criteria and procedures of the corporate strategies, these latter can result distorted or, in any case, maimed in their application.

Sheppard and Chowdhury (2005) argue that the causes of the corporation crisis generally do not reside only in the external environment or only in the organization, but must be attributed to both these forces, with the consequence that the company's crisis indicates essentially a problem of

misalignment of the company regarding to its competitive environment. In these terms, the crisis is by definition a crisis of consonance, on the one hand between the corporation strategy and its external environment and on the other between the corporation strategy and its organizational structure.

It follows that in order to implement long-term viability the restructuring processes should restore a double consonance: strategic and operational. More precisely, the scholars who first dealt with this issue (Hedberg et al., 1976, Hofer, 1980, Schendel et al., 1976, Quagli, 2016, Tichy and Ulrich, 1984); have developed a contingent approach whereby the content of interventions of the *turnaround* depends on the type of crisis:

- when the corporate crisis is caused by problems of inefficient implementation of a still valid strategy, then the *turnaround* interventions are focused on cost reduction, on the asset downsizing (or disposal of parts of the *assets*) and on other operational measures such as advertising campaigns in order to raise the volume of sales;
- when the corporate crisis lies in problems of competitive positioning, that is of a disconnection of the company with its environment, then changing the strategic direction becomes the prerequisite for the *turnaround* (Garzella, 2005 and 2013).

Another line of research has analyzed the *turnaround* processes distinguishing the content of the interventions (strategic vs. operative) with respect to the enabling factors that can promote or prevent the launch and success of the *turnaround* (Figure 1 - <http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

Change management refers to the necessity to face discontinuity and variations, ever more rapid and radical, in the competitive arena (Parini, 1996; Ferri, 2006).

Companies should have the capacity to manage unpredictable situations and modify and review their own choices to be able to quickly change their strategies. This means they have to be able to think about change in an open way, trying not to suffer from it but being able to manage it by exploiting all the opportunities that change may offer.

Changes therefore need a continuous monitoring in order to control the coherence with the formulated research questions in order to adapt the management to the variations which have taken place and so making strategy actuation and success possible.

Rapidity in strategy execution is key; this implies the capacity to integrate management by efficient control and evaluation processes able to grant the implementation and execution of the assumed strategic decisions.

The choice of different business administration and reporting systems first requires an analysis of the features of the BAS made up of different elements: data, information, technological and human resources, methodologies and tools to convert data into information (Ferri, 2006; Tron, 2009).

The *ex post* evaluations, that normally most of the BAS supply, are oriented to observe the past; they cannot offer any support to the rapid evaluation of changing prospective and therefore to reorient the corporate strategic behaviour. The reporting controls remains, generally, focused on the operative actuation phase resulting from the decisional process and is therefore based on economic-financial information and on accounting tools of short term period. It then becomes necessary to implement a BAS, like the ERP systems, that enables the management to control process and activities rather than products (Druker, 1995; Tron, 2009).

The implementation of control methodologies and tools needs to become an articulated and continuous process to support, on an *ex ante* vision, the rescheduling of the strategic decisions (Garzella, 2005; Tron, 2013). The critical success factors, in fact, are able to determine the success and profitability of the competitive businesses and they have to be analyzed to capture the performances which are due to the alternation of the critical success factors and/or modification of their relative strategic weight (Galeotti et al., 2016).

Corporate doctrine has been principally focused on the management turnover (*leadership*) and on the *corporate governance* as enabling processes of turnaround, while in this study we focus on the business administration systems that are a part of the wider system of corporation *governance* and *management* (Lenahan, 2011; Slatter and Lovette, 1999; Greiner, 1967).

Regarding the strategic and/or operative content of the *turnaround* strategies, scholars have identified some recurrent areas in which the companies in crisis act to restore long-term equilibrium conditions. The content of the *turnaround* strategies are variously defined, but relate to the following major areas (Garzella, 2005, Sheppard and Chowdhury, 2005, Sudarsanam and Lai, 2001): 1) competitive repositioning through the redefinition of corporate strategies, at *corporate* and *business* level; 2) operational restructuring, including a reduction in costs and the downsizing of the corporate *assets* (*downsizing*); 3) organizational restructuring aimed at producing changes in the way in which we make the management processes of decision and control (organizational structure, operating

systems, culture); 4) financial restructuring through the restructuring of the assets and liabilities of corporations.

2.1. Business administrative systems during financial distress

One of the most important drivers of turnaround success is the ability of information systems to answer the call of new relevant data and monitoring corporate performances (Marchi, 2003).

This request for data is increasingly related to the likelihood of supporting the strategic decision-making process (Galeotti et al., 2016; Mancini et al., 2013, Miolo Vitali, 1993).

Business Administrative Systems is considered a factor in the development of the company because it makes management more effective when addressing, monitoring and incentivizing the organizational behavior (Paletta and Alimehmeti, 2016).

The BAS should be able to transform large amounts of information into decisions and policy actions and should operate on permanent data storage scanning information with continuity, regardless of the contingent need for information.

Based on previous research, we expect that BAS provide information about the state of solvency and early warning signs of corporate crisis (Altman and Hotchkiss, 2010, Ooghe and De Prijcker, 2008, Smart and Vertinsky, 1977, Schendel et al., 1976, Reilly, 1993, Marchi, 2014); companies with more robust BAS react more coherently and timely with respect to the recovery strategies in order to manage the crisis and, among other things, should also have greater chance of emerging from the crisis (Bastia et al., 2011, Lewis, 2006, Lenahan, 2011). The reliability of BAS helps to build confidence around the company and, for some time, it may contribute to maintain good relations with banks, suppliers and customers even if the administration shows economic and financial imbalances (Paletta, 2008, Merchant and Van der Stede, 2007, Tron and De Giovanni, 2015).

However, the failure of companies with effective BAS in place has enabled the development of new research question. In fact, the organizational context of the typical corporate crisis represents a unique environment in which the alleged rationality of organizational behavior has to deal with situations and expectations different from those that characterize companies that operate under stable conditions (Catturi, 2009, Ooghe and De Prijcker, 2008). There are elements that characterize the corporate crises that contribute to outline a decision-making environment which is quite peculiar: the pressure to act quickly, the inertia from the

entrepreneurs and managers; the psycho-social status of the staff constrained by the uncertainty and frustrating conditions created from the possible consequences of the crisis; the lack of financial resources that can push managers to take on more risk than they should; the loss of confidence from the external stakeholders and their capacity to influence the company decisions as their consent is required to restore financial equilibrium; the pre-bankruptcy regulatory framework (Kor, 2006).

The high risk of dissolution that accompanies enterprise management during a crisis creates a perception of decision-making clearly different and this cannot remain invariable without influencing the role of BAS and their use in crisis management (Lagadec, 1991). Figure 2 (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>) shows a general scheme in which the antecedents and consequences of the BAS are highlighted.

The level and type of pressure to which the companies are normally exposed in their business environment grow exponentially during a crisis. The choices and management behavior are subjected to pressure from banks, suppliers, employees, tax authorities, and customers. These various groups are asking the company to regularly fulfill its commitments: pay off debts, return the overdrafts, fulfill granted extensions of the deadlines and commitments contractually assumed, non-alteration of the normal flow of supply and delivery and provide true, accurate and current information. The pressure of the stakeholders during a crisis amplifies the characteristic features of the organizational culture. Stable and conservative organizational cultures manage these significant external pressures with an amplification of the natural inertia to change, seeking insurance in the traditional ways of doing things by moving within the predictable decision-making schemes. In contrast, aggressive and dynamic organizational cultures tend to experience the significant external pressure with a challenge and payback behavior, which accentuates the risk appetite and tends to justify as necessary unfair or 'behind the limits of legal' behaviors (Quinn and Rohrbaugh, 1983).

BAS are influenced by organizational culture (Schein, 2010), in the sense that this contributes to determine what people believe, how they behave and the values to which they refer. BAS include a set of tools, structures and operating procedures that are intended to manage the company in accordance with the conditions of effectiveness and efficiency, ensuring the reliability of financial statements and other communications to the public and guaranteeing the compliance of decisions and behaviors with respect to laws, policies and regulations, including the prevention and

detection of crime and corporate fraud (Lewis, 2006). The kind of organizational culture and the particular environment that is created during a crisis due to the pressure of stakeholders, can lead to improper and opportunistic use of BAS that ends up with the worsening of the situation. In theory, depending on the organizational culture, it can be expected that the management control systems induce two types of opposing attitudes, but both deleterious from the effects of bankruptcy's point of view.

Firstly, stable corporate and conservative cultures appeal to administrative systems to develop internal business plans and propose arrangements for debt restructuring. The degree of objectivity of such plans may be affected by the fact that the management is based on traditional methods of decision-making and control, and often accompanied by previous well-known and condescending business consultants, rather than relying on radically new points of view coming from new expert consultants in corporate crisis management (Tron, 2013). In this sense, the administrative systems are deeply rooted in managerial practices, may be proved to be a factor of inertia to change; a cultural border to conventional ways of dealing with problems. The consequence is that the management can be induced to take less innovative or radical decisions than in the past, justifying the attitudes of closure instead of making a serious and informed analysis of the causes of the crisis and pursuing strategies that would be needed to cope with it.

On the other hand, in dynamic and aggressive corporate cultures the risk of an opportunistic use of the administrative systems may be accentuated during a corporate crisis. The literature has shown that managers might respond to the crisis by acting as if they had nothing to lose, taking high risks and trying to do anything in order to come out as winners (Staw, 1981, D'Aveni and MacMillan, 1990, Carmeli and Sheaffer, 2008). Business owners and managers, in general, are not eager to see their names associated with that of companies that destroy economic value, because this undermines their reputation in the professional community and limits their ability to negotiate future salaries or higher positions. This attitude may be taken to an extreme and may lead individuals to be obstinate on choices and investments that are not producing results. This could lead to the point of using administrative systems to justify decisions already taken or even to manipulate the data and extort the consent of leaders, collaborators and external stakeholders such as banks, trade unions, suppliers and sponsors.

In view of the foregoing, the research question can be further increased with the following proposition: businesses that, finding themselves in a state of insolvency use administrative systems in an organizational context

that has characteristics clearly different from that of companies that are not in financial distress. The administrative systems can help start a turnaround process, but due to deteriorated decision-making behavior they could actually end up increasing the negative effects of bankruptcy.

3. Research design

The survey conducted in 2011 by the Observatory on Corporate Crisis (OCI) in relation to the verification of the passive state of bankrupt companies provides empirical evidences to test the research questions. The survey contains the profiles of *governance* and *management* of bankrupt companies, as well as the causes and circumstances of the distress, including previous recovery attempts by the companies (Bastia et al., 2011).

A total number of 668 questionnaires were collected related to bankruptcies declared between January 2008 and October 2010, pertaining to 51 courts in 20 Italian regions collected during the survey. The sample includes 258 individual companies and 410 joint-stock companies. Out of the 668 bankruptcy procedures, in case of the 384 bankruptcies it was possible to obtain the financial statements data and other information on companies from the Bureau Van Dijk AIDA database that contains comprehensive information on companies in Italy, with up to five years of history.

3.1 Turnaround initiatives

The OCI questionnaire contains a series of questions designed to detect whether the sample's companies that have undertaken bankruptcy within the preceding five years have implemented any restructuring strategy. The following table shows the descriptive statistics of the various initiatives undertaken, divided into four groups (Table 1 - <http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

The financial restructuring measures are most popular within companies examined (52% of responses). On the contrary, the restructuring plans and juridical restructuring are less common, with the exception of the preventive arrangement that relates to 6% of the companies surveyed. Plans of extrajudicial restoration and cession of assets have been initiated in 25% of cases examined, and also include some cases of productive reconversion.

The different types of extraordinary operations (transformation, fusion, acquisition, spin-offs, etc.) are widely used in 18% of procedures, with the only exception being of fund intervention by *private equity* that did not affect any of the companies that latterly declared themselves bankrupt.

3.2 Business administrative systems

The OCI questionnaire has included a series of questions designed to detect the development of BAS in enterprises. More precisely, three specific aspects were examined: (i) the organizational structure, with the request to specify the number and type of directions as part of the administration, finance and control function (ii) the content of the activities of management and control; (iii) the instruments used (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

In 62 % of the cases, corresponding to the majority of respondents, the administration and control function has no precise definition or organization or it has no results. Only in 15 companies is there an equivalent figure to the CFO, while in a third of respondents exists a structuring of functions with more managers, almost always supported by external experts.

With regard to the type of activity carried out by the CFO function, Table 3 shows the insignificant presence of activities such as the formation of the consolidated financial statements, the management of special funds and debt collection. Instead, somewhat more present activities among failed enterprises include general accounts and the financial statements, the management of the active and passive cycles and the tax obligations.

To confirm a general lack of management and control systems, Table 3 (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>) below shows the spread of the companies examined of some typical tools of management and control considered in the literature as expressive of the evolution of the function and of a rational approach of business management (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

None of the companies in bankruptcy have a code of ethics or a strategic plan, while only 4% of the companies have analytical accounts and interim financial statements as tools of management control. The lack of organizational structures, roles and job positions, distribution of authority and responsibility and formalization of operational procedures, confirms the low managerial level of the bankrupted companies.

Although the data generally confirms the lack of administrative systems, there is a low but significant number of bankrupted companies characterized by a certain use of advanced managerial tools. Since these firms have failed as well, it is interesting to understand if whether the lack of managerial control systems represents a factor that exacerbates the negative effects of bankruptcy.

4. Methodology

This research examines corporate performance after the declaration of bankruptcy, analyzing the consequences of the pre-pack plans and business administration systems on the severity of failure. Firms encountering financial distress undertake pre-pack plans in order to restore the situation. However, in some cases these business strategies prove to be ineffective. The existing literature has not investigated the consequences of these strategies in the event of failure to see if the final effects lead to a deterioration of the severity of failure.

Our empirical analysis takes an exploratory approach in understanding the possible relationships between different factors and the severity of failure measured by two indexes: (i) PPC, measured as the (Equity-Liabilities) / Net invested capital. The ratio gets higher values if debts and other liabilities are greater than equity. Normally, the bankrupted firms have negative equity, which increases the weight of the numerator relatively to the denominator. On the other hand, if the equity is positive and equals the liabilities then the ratio would be equal to 0. Thus, higher values indicate the greater severity of failure; (ii) the durability of the company, measured by the number of years from the registration date. The purpose of this analysis is to determine whether the restructuring strategies and management control business administrative systems affect positively or negatively the durability of the company.

4.1. Model Setup

To test our research questions we include the bankruptcy, organizational, governance, performance and control variables (Table. 5 - <http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

Given the tangled web of relationships between different factors influencing the effects on debt ratios, we do not rely on multivariate statistics, as these do not consider the mixed relations between variables. Thus, we use Structural Equation Modeling as a robust model to test our research questions. One of the advantages of the SEM analysis, is the possibility to derive latent variables from observed variables. This method has been used to conceptualize the variables of business administrative systems, Years of Crisis and Restructuring Strategies, starting from the OCI survey data. Table 6 (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>) presents the factor loadings for each latent variable.

The results show that all the models have an overall significance, $p < 0.01$, and an acceptable goodness of fit. GFI, PCFI, RMSEA indicate a good level of reliability of the model (Table 7).

Table 1. Models Validity

Model	CMIN/DF	SRMR	CFI	RMSEA
H1: PPC	3.707	0.054	0.805	0.098
H2: Durability (age of the firm)	3.680	0.052	0.811	0.098

Validity is the estimate for the extent to which the measurement tool measures its features. The construct validity is checked by convergent validity and discriminant validity: (i) CMIN/DF: Discrepancy between Sigma(theta) and the unrestricted S / degrees of freedom). Acceptable if <5; (ii) SRMR (standardized root mean square residual) it's a measure of absolute goodness of fit of the model. It indicates a good model if < .05; (iii) CFI (comparative fit index) based on the non-centrality, indicates a good fit if its values are around 1; (iv) RMSEA (root mean square error of approximation) one of the most important goodness of fit indicators. It shows a good fit for values < .1

5. Results

Restructuring strategies, BAS and severity of failure (PPC)

The first model examines the relationship between restructuring strategies, business administration systems and the severity of failure measured by the PPC ratio. We account for both direct and indirect effects. The main results are graphically shown in Figure 3 (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>) while all the results can be found in Table 8 (<http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>). We control for age, size and sector of the companies.

An increase of the PPC indicates higher debts than capital invested expressive of the negative effects of bankruptcy. Restructuring strategies and management and control systems have a negative relationship with PPC. For each increase of each of the two latent variables, CONTROLSYS and RESTRUCTURING, the PPC is reduced, respectively, -.859 and -7.728. The relationship with restructuring strategies shows a stronger relationship than management and control systems, but nevertheless, the two coefficients are not statistically significant.

With regard to the range of activities (administrative, financial and management control) carried out by the CFO function (see Table 3), there is a positive relationship between PPC and the administrative activities equal to .297. This result shows that firms that carry out general accounting activities worsen the effects of failure, increasing the burden of debt on the

capital invested. Other configurations of the type of activities held by the firm are not significant.

One possible explanation for this effect is that companies that carry by themselves all the main functions related to the collection, processing and communication of accounting information have the opportunity to exercise greater control over internal procedures aimed to the preparation of the financial statements. During a crisis, the presence of external consultants can help the entrepreneur to gain a more realistic and balanced perspective on the actual company's financial position. On the other hand, a company that self-manages the administrative processes, during a period of crisis could take a self-conscious approach that through opportunistic and fraudulent behavior exacerbate the negative effects of bankruptcy.

The organizational models of CFO function (see Table 2.), show that the presence of the CFO reduces the severity of the failure with a coefficient of $-.189$. This result confirms that the development of the administrative function is a factor that can mitigate the consequences of failure.

It is important to note the positive relationship between the activities and the tools of management and control. Firms that include different types of administrative, financial and control activities have a positive relation with the use of advanced tools such as management accounting. In addition, the management and control systems have a positive relationship with the governance structure. The presence of a Board of Statutory Auditors and a Board of Directors increases the use of the management and control tools, respectively, $.44$ and $.18$. On the contrary, the absence of management decreases the use of the instruments of administration and control of $-.03$. These results meet initial expectations.

Restructuring strategies are positively related with the tools and activities of administration and control. The positive relationship with the management and control systems indicates that for every tool that is used by the enterprise, regeneration strategies increase of $.12$. In addition, the positive relationship with the activities of administration and control indicates a greater interdependence; moving from simpler structures (administration), to more advanced ones (control). Respectively, the coefficients are $.015$, $.02$ and $.037$. On the other hand, the restructuring strategies undertaken from bankrupted companies are consistent with more advanced company profiles, characterized by the presence of a board of auditors and a board of directors.

The presence of a CFO has both direct and indirect effects on PPC: the direct effects are statistically significant, whereas the indirect ones are not significant. Indirect effects are mediated by three main variables

represented by the type of activities carried out by the CFO (administrative, financial, planning and control), the instruments used and the restructuring strategies.

Durability

The second model, expresses the relationship between restructuring strategies, business administration systems and the index of durability (age) of the company. The results did not show significance in almost all cases, except for BAS (see Figure 4 for the main results and Table 9 - <http://www.sidrea.it/business-administrative-systems-post-bankruptcy/>).

Coefficient 1.854 shows that for each increase in management and control systems (tools), firms increase their longevity by +1.8 years. The other significant factor is the negative relationship between the absence of CEO and the age of the firm at the time of failure. The negative coefficient shows that firms which do not have a top manager have a - .41 years of age less than those with at least one manager.

The results of this second model do not have the statistical significance to demonstrate that restructuring strategies undertaken prior to the declaration of bankruptcy have positive effects on the durability. However even with this second model data show that restructuring strategies are determined by companies with evolved administrative and managerial control profiles as well as from the point of view of the government and management structure.

6. Conclusions

The topic of corporate failure has received wide interest from scholars (McKinley et al., 2013, Trahms et al., 2013),. In this study we have examined the relationship between the business administrative systems (organization, activities, and instruments), restructuring strategies and the effects of failure and the durability / age of the firms.

The structural equations model used in this paper allowed us to study both the direct and indirect effects of administration and control systems on the importance of the economic and financial consequences of failure and business durability, taking into account a range of control variables such as firm size, geographic location, business sector, return on investment, years of crisis, the governance structure and management of bankrupt companies.

As for the the direct effects, the only statistically significant relations turn out to be those relating to the organizational model of the administration, finance and control functions. The presence in the bankrupted companies of a CFO and a board of auditors have mitigating

effects of the economic and financial consequences of failure. The empirical model confirms the expected results on the theoretical level in the sense that a more advanced administration function is a prerequisite for the production of economic value even when it comes to a company in crisis, as it allows to reduce the consequences reducing the disruption, in proportion to invested capital, the level of debt and equity deficit.

The presence of an evolved administrative function, as the CFO, allows to solve management problems (Ooghe and De Prijcker, 2008), integrating financial and management accounting and reporting, financing and investment decisions, capital structure, management of net working capital, tax management, extraordinary transactions. Especially during a corporate crisis is important the ability to manage the interdependencies between these different aspects, reducing the risk of sub-optimizing choices such as not having a financial structure consistent with the investment policies, or the economic management of the revenues and costs not coped with the management of cash flows. Similarly, the presence of the supervisory board allows to mitigate the negative effects of corporate crisis thanks to surveillance and monitoring the adequacy of the firm's administrative function.

With regard to the indirect effects, the theoretical assumptions underlying this study foresaw a brokerage role of restructuring strategies between business administration systems and the severity of the disruption. Firms with a more advanced BAS should show greater reactivity compared to the crisis of enterprise, engaging in operations of financial and productive economic restructuring designed to manage financial difficulties. Confirming the initial research question, this research demonstrates the existence of a positive relationship between restructuring strategies and business administrative systems. Firms with advanced systems appear to be more prone to opt for restructuring strategies as a way of dealing with crisis. However, the results are not statistically significant and therefore the results cannot be generalized.

In addition, the SEM analysis shows a strong relationship between the systems of management and control and the age of the bankrupted firms. The use of advanced managerial systems provides firms with corporate risk management methodologies impacting positively on the durability of the business. The analysis shows that for every increase in administrative and control systems the longevity of the firms increases by 1.8 years.

The implications of the results of this study are significant both in terms of research and of reform policies of legal procedures for the corporate crisis management. From the research point of view, this study provides

original quantitative evidence on the role of the administration and control systems in companies in crisis. Advanced companies in terms of organization, activities and management and supervisory tools, demonstrate greater durability, mitigating the negative effects of bankruptcy. This result is particularly significant given that extant research has focused on the role of the administration and control systems only in the prevention of corporate crisis.

On the other hand, the research findings suggest that legal proceedings to the corporate crisis management, including in particular the restructuring strategies, should further enhance the role of the administration and control systems, providing incentives to companies to adopt more advanced systems in order to mitigate the negative effects of bankruptcy. This is relevant for example in the examination of proposals when it comes to "white restructurings", for which there is no plan and therefore no actual restructuring agreement. Companies in crisis with more administrative and advanced monitoring systems demonstrate greater reliability and therefore appear more meritorious to access a protected institutional environment from individual executions exercised by individual creditors.

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