PICCOLA IMPRESA
SMALL BUSINESS

Rivista Piccola Impresa/Small Business

n. 3, anno 2021

Codice ISSN 0394-7947 - ISSNe 2421-5724

CAUSES OF CORPORATE CRISIS: AN INVESTIGATION ON SMES TO SUPPORT THE LEARNING PROCESS

Francesca Sgrò
University of Urbino
francesca.sgro@uniurb.it

Federica Palazzi
University of Urbino
federica.palazzi@uniurb.it

Massimo Ciambotti
University of Urbino
massimo.ciambotti@uniurb.it

Linda Gabbianelli
University of Urbino
linda.gabbianelli@uniurb.it

Article info

Date of receipt: 27-05-2021
Acceptance date: 28-03-2022

Keywords:*SMEs; firm bankruptcy; internal and external causes*

doi: 1doi.org/10.14596/pisb.2856

Abstract

The study is an invitation to reflect on the leading (internal and external) causes of the crisis for SMEs while taking their corporate age into account, and act as a useful tool when identifying the critical areas that require intervention to prevent or mitigate the crisis. A questionnaire was administered to the legally appointed bankruptcy trustees that managed 228 bankruptcy procedures. Descriptive statistical analysis and exploratory factor analysis have been employed. Data shows that planning activities, governance, and ownership issues (as internal factors), in addition to economic and industrial crisis (as external determinants) are recognized as a prerogative for a firm bankruptcy procedure activation. The main limit concerns the reduced sample size due to challenges in the data gathering process while also considering the "bankruptcy status" and the reference context; these are characterized by small-sized enterprises, hilly and mountainous landscapes, and fairly secluded locations with poorly developed infrastructures.

1. Introduction

The current economic, social, and political system is facing numerous challenges due to the COVID-19 pandemic. Society is experiencing social distancing and isolation, public health systems are showing their strengths and weaknesses, and governments are providing recovery programs. In the meantime, small and medium-sized enterprises (SMEs) have been extremely affected by a supply and demand shock, causing, in turn, liquidity shortages. Forecasts show dire projections. There is a possible risk that over 50% of SMEs will not survive in the short term, especially due to liquidity shortage, and it has been estimated that SME unemployment will reach about 60-70% . That being said, in all OECD countries, SMEs represent the vast majority of companies where a widespread downfall of these enterprises will lead to a global reduction of economic and social growth prospects (OECD, 2020).

In Italy, SMEs provide 66.9% of overall value-added, surpassing the EU average of 56.4%, with an employment rate of 78.1%, compared to the EU average of 66.6%. The share of employment generated by SMEs is even higher in micro firms, which provide 44.9% of employment compared to the EU average of 29.7%. Moreover, these enterprises have been affected the most in terms of the drop in demand, problems along the supply chain, and/or transport/logistics (European Commission, 2019). Compared to larger companies, SMEs show less resilience and flexibility when dealing with the costs these shocks entail, and these companies can rely on fewer tangible and intangible resources, facing the worst conditions in accessing capital (Quintiliani, 2017). Therefore, the SME survival rate is lower compared to larger companies (European Commission, 2019). The recent reform of the Italian bankruptcy law has approved the "Crisis and Insolvency Code" with Law 155/2017, aiming to provide significant changes to the discipline of corporate crisis and insolvency. This legislation was expected to come into force in September 2021, but has been postponed one year because of the COVID-19 pandemic.

Several studies have investigated the causes that lead to the failure of a firm, in particular: management/entrepreneur features, company characteristics, reference environment, corporate governance, relationships with stakeholders and corporate policies (Altman, 1968, 1984; Thornhill and Amit, 2003; Ciambotti, 2005; Ciampi and Gordini, 2013; Ciampi 2015, 2017, 2018; Gabbianelli, 2018; McNamara et al., 2017).

Notwithstanding the growing interest in enhancing the theoretical foundation and the practical approach to a firm's crisis, studies providing a comprehensive investigation into crisis origins in SMEs are still scarce. This study tries to fill the existing gap in the literature which examines the external and internal causes of bankruptcy in Italian small and medium-sized enterprises, while also factoring in corporate age.

Therefore, this study wants to bridge the divide between theory and practice. This research investigates the determinants of the bankruptcy of SMEs within the January 1994 - November 2017 time frame that filed for bankruptcy at Urbino's Bankruptcy Court.

A survey was administered to the 228 bankruptcy trustees . It was designed to gather background information on the firms, along with data pertaining to the external and internal causes of bankruptcy. Hence, descriptive statistical analysis and factor analysis were employed to identify the main financial distress factors for Italian SMEs.

Therefore, the research formulates the following question: (RQ1) What external factors determine the crisis of SMEs? (RQ2) What internal factors cause the crisis of SMEs? (RQ3) Is there a correlation between the firms' age and specific causes of the crisis?

This paper can be considered original for several reasons: it tries to map the causes of the crisis for all SMEs that were declared bankrupt by a specific court; moreover, it tries to investigate the association between the firms' age and the causes of the crisis, given that previous studies consider firm age only as a variable to predict SMEs' default (Zanda and Lacchini, 1995; Abdullah et al., 2016; Lugovskaaya 2010); finally, the results are interpreted considering the actual COVID-19 crisis and the chances of survival for most SMEs, trying to suggest public interventions to support SMEs.

This paper is structured as follows. Section 2 reviews the literature on factors influencing the firm's failure. Section 3 describes the research methodology, then section 4 presents the findings, followed by a final discussion and conclusion.

2. Literature background

The Italian "Crisis and Insolvency Code", ultimately approved in February 2019, was created to promote better conditions for creditor satisfaction, as well as safeguarding entrepreneurs' rights by helping overcome the crisis (Riva and Comoli, 2019). Among the interventions envisaged, the Code provides a legal definition of the "crisis" concept and introduces a compulsory early warning system to detect symptoms before the onset of the crisis.

The term "crisis" refers to a situation in which a company faces numerous challenges in terms of economic and financial difficulties that increase the probability of insolvency brought on by a cash flow shortage, which, subsequently, leads to a future inadequacy to comply with the previous obligations (Carter and Van Auken, 2006; Poli, 2020). Furthermore, the corporate crisis is characterized not only by economic distress but by inadequate strategic and managerial approaches on behalf of the governing bodies that undermine the firm's survival (Ciambotti, 2005; Cesaroni and Sentuti, 2016). Strategic monitoring must be periodically carried out to verify the company's health, through the control that should be adapted according to the degree of turbulence and environmental uncertainty for the effective management of strategic emergencies (Ciambotti, 2005). Generally, SMEs are unprepared when it comes to managing the negative consequences produced by an unforeseen strategic setback. The latter, to which SMEs are more vulnerable, are unpredictable by nature.

Consequently, once the crisis has been identified, it will be necessary to evaluate the opportunity of recovering (or not) the economic and financial viability. In other words, there will be the need to evaluate whether the crisis is irreversible; as a consequence, it will lead to the enterprise exiting from the market or setting off a liquidation process, or even whether there is the chance to undertake recovery processes (Brugger, 1984, 1986; Coda, 1986; Camacho-Miñano et al., 2015).

The dynamic of a crisis is characterized by several interconnected phases: a reduction of revenues and/or increase of costs, worsening of margins, a need for liquidity, the extension of payment time of suppliers/creditors, an increase in financial costs, the inability to generate cash flow for debts, additional financial needs, delayed or missed payment of tax-related debts, deterioration of bank rating, reduction of the credit line, inability to face bank or supplier debts, and insolvency.

Therefore, the crisis can be seen as a severe deterioration process of a firm's vitality structure that can take place either progressively, with a continuous and ever-increasing decline, or caused by sudden external factors (i.e. global economic crisis, industry-specific crisis, natural or health catastrophe, etc.), internal factors (i.e. the disengagement or the sudden passing of the entrepreneur-founder, changes of ownership and governance structures, accidents not adequately covered by insurance, etc.) or changes in the strategy structure (Altman, 1984; Thornhill and Amit, 2003; Ciampi and Gordini, 2013; McNamara et al., 2017).The strategic problem stems from the incoherence of the company within the reference context. The adequate and complex management of the dynamic relationship between enterprise, strategy, and the environment is the key factor for a firm's success or failure (Ciambotti, 2005).

In management and accounting literature, there are two main branches of research regarding the factors influencing a firm's failure: subjective-behaviourist and objective (Guatri, 1995).

The subjective-behaviourist approach sustains that the crisis is brought on by subjective (internal) variables related to managerial and entrepreneurial characteristics (Novak and Sajter, 2007). These factors regard the company's characteristics, such as the resistance to change, succession processes, inability to adapt to environmental changes due to insufficient strategic and operational flexibility, as well as structural rigidity.

According to some authors (D'Aveni and MacMillan, 1990; Greening and Johnson, 1996), factors related to the management sphere are considered the most influential determinants for bankruptcy. Lack of management skills and competences, as well as patterns of reluctance and inertia, reduce the probability of long-term survival, leading to missed opportunities through strategy changes (D'Aveni and MacMillan, 1990; Ceccacci and Devetag, 2014; Ooghe and De Prijcker, 2008; Gilbert, 2005). Companies' distress can also be caused by excessive optimism and risk behaviours, where risks are neither considered, nor managed. These risk behaviours threaten the firm's wealth and stakeholders' interests.

In addition, managers and entrepreneurs making wrong choices concerning strategy, investments, commercial areas, financial policy, or operational aspects can lead to a corporate crisis (Ooghe and De Prijcker, 2008; Pace, 2013; Pierri et al., 2013). Finally, the age and size of companies should also be taken into account. Younger firms can be lacking in: managerial skills, financial management abilities (Thornhill and Amit, 2003), tangible and intangible resources, legitimacy, and stable relationships with stakeholders. These are all forerunners of the crisis.

The older the firm, the lower the probability of bankruptcy (Carter and Van Auken, 2006). However, changes and evolution of the competitive environment are recognized as the factors which bring older organizations to their demise. Thus, older firms would seem incapable of adapting to environmental changes (Thornhill and Amit, 2003).

According to the objective approach, several external causes can produce a crisis: environmental turbulence and complexity, industry-specific crises, supply and demand shock, deterioration of relations with stakeholders, and changes in the competitive, legislative, social, and technological reference context (Haldma and Laats, 2002, Szychta, 2002).

Numerous studies (Colombelli et al., 2013; Martinez et al., 2019) suggest that the probability of business failure is very high during a global economic crisis, seeing as firms face a turbulent and uncertain environment. These unstable situations are characterized by high inflation, unfavourable exchange rate changes, and supply and demand shock leading to the firm's bankruptcy (Bhattacharjee et al., 2009). These factors lead to declining revenues, profits, and liquidity that highly influence the firms' survival (Cerrato et al., 2016). However, Martinez et al. (2019) highlight the critical importance of human capital in mitigating the effects of the financial crisis on a firm's failure, especially for service companies.

4. Methodology

This study was developed in collaboration with Urbino's Bankruptcy Court, and it aims at investigating the factors leading to a firm's failure. The total population is composed of 228 companies that, during the January 1994 - November 2017 time frame, were declared bankrupt by the court. The primary data concerning the failed companies and their bankruptcy were collected from the Registry of the Urbino Bankruptcy Court. Also, a survey was developed and forwarded by email to the legally appointed bankruptcy trustee to manage the procedure.

The survey asked a variety of questions in three sections as follows (table 1): the first section refers to the firms' characteristics in terms of sector of activity, legal form, size, and age at the date of bankruptcy; the second section gathered information regarding the entrepreneur's profile (age, educational level, and previous work experiences); finally, the third section investigates the external, and internal causes determining the firms' crisis. The judgement of the bankruptcy trustee was requested and measured through a Likert scale that ranges from 1 (uninfluential) to 7 (profoundly affecting the bankruptcy).

An exploratory factor analysis (EFA), with Promax rotation, has been applied to aggregate the several external, and internal causes to identify the main components associated with the corporate crisis and consequent bankruptcy procedures.

Table 1 – The questionnaire design

Questionnaire sections	**Area of investigations**
Firm general information	• Sector of activities • Legal form • Size • Age at the bankruptcy's date
Entrepreneur's profile	• Age • Educational level • Previous work experience
External and internal causes	External environmental causes • Industry-specific crisis • Global economic crisis • Market-specific crisis • Stakeholder relationship quality • High procurement cost of raw materials Internal firm-specific causes • Inadequate management of financial needs • Debt increase • Under-capitalization • Wrong strategic choices • Inappropriateness of credit management • High fixed costs • Lack of data analysis • Excessive optimism in strategic plans • Liquidity shortages • Lack of cost control • Oversized fixed assets • High warehouse stock • Insufficient mandate processes • Ownership conflicts • Governance conflicts • Business succession conflicts

4. Findings

4.1 The descriptive statistics

The sample is composed of 105 firms (46% of the total population) that filed for bankruptcy between 1994 and 2017. These enterprises mainly operate in the manufacturing sector (55%) and, to a lesser extent, in the sectors of services (16%), wholesale trade (15%), and construction (14%). Based on the legal form, 76% of the firms are limited liability companies, 19% are partnerships, and 5% are one-person businesses. Table 2 shows the profile of enterprises in terms of the number of employees and members. The number of members is, on average, equal to 2.14 with a minimum value of 1, for one-person businesses, and a maximum of 8 for limited liability companies or partnerships.

The number of employees is, on average, equal to 7.68, with a standard deviation of 12.98 and a median value of 3; the minimum and maximum values are respectively of zero and 70 workers.

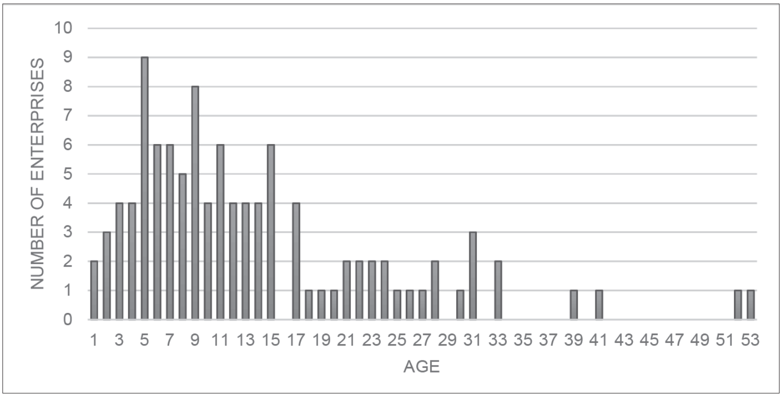
Table 2: The firms' profile

Variables	**Total**	**Mean**	**Median**	**Dev. St**	**Min**	**Max**
Members	225	2.14	2	1.22	1	8
Employees	776	7.68	3	12.98	0	70

Figure 1 shows the company's age at the starting date of the bankruptcy procedure. Specifically, 13 enterprises filed for bankruptcy before 2008 and 92 during the 2008-2017 time-frame. On average, companies filed for bankruptcy after 13.68 years. This means that a firm's age could be a variable that potentially affects a firm's ability to overcome a crisis by avoiding the bankruptcy procedure.

Thus, bankruptcy could mainly concern younger firms, while older firms seem to be more likely to successfully cope with the crisis.

Figure 1: The age of failed enterprises



On average, the entrepreneurs involved in the bankruptcy procedures were around 50 years old (data refers to 144 entrepreneurs out of a total of 225).

As far as the entrepreneurs' education is concerned, 2 attended elementary school, 61 reached middle school, 60 attained their high school diploma, and 8 held a Bachelor or Master's degree (data are related to 131 entrepreneurs out of a total of 225). Interestingly, a significant portion of the entrepreneurs (70 out of 122 respondents) declared that they had previous professional experience in the same sector in which they were running their current business. In contrast, 52 entrepreneurs declared not having any previous work experience in the industry.

Table 3 highlights the external causes that contributed to the crisis and determined a firm's insolvency and bankruptcy. The external causes that obtained the highest scores are: industry-specific crisis (4.65), global economic crisis (4.04) and market-specific crisis (3.49). Other causes, such as the quality of the relationships with stakeholders (2.73), the high procurement cost of raw materials (2.17) seem, on average, to have had less importance when dealing with corporate crisis.

Table 3 - The external causes of bankruptcy

External causes	**Obs.**	**Mean**	**Dev. St**	**Min**	**Max**
Industry-specific crisis	104	4.65	2.03	1	7
Global economic crisis	104	4.04	1.99	1	7
Market-specific crisis	100	3.49	1.96	1	7
Stakeholder relationship quality	101	2.73	1.69	1	7
High procurement cost of raw materials	101	2.17	1.40	1	7

The internal causes contributing to the corporate crisis and to the consequent bankruptcy are shown in table 4: inadequate management of financial needs (3.84), debt increase (3.62), under-capitalization (3.56), wrong strategic choices (3.54), the inappropriateness of credit management (3.46), high fixed costs (3.41) and lack of data analysis (3.1). These obtained the highest scores. The internal causes deemed less important are the following: excessive optimism in strategic plans (2.78), liquidity shortages (2.73), lack of cost control (2.24), oversized fixed assets (2.2), high warehouse stock (2.2) and insufficient mandate processes (2.04). Conflicts related to ownership, governance, and business succession do not appear to be relevant internal causes.

Table 4 - The internal causes of bankruptcy

Internal causes	**Obs.**	**Mean**	**Dev. St**	**Min**	**Max**
Inadequate management of financial needs	103	3.84	1.73	1	7
Debt increase	100	3.62	1.75	1	7
Under-capitalization	101	3.56	1.90	1	7
Wrong strategic choices	102	3.54	2.01	1	7
Inappropriateness of credit management	103	3.46	1.79	1	7
High fixed costs	102	3.41	1.97	1	7
Lack of data analysis	103	3.1	1.72	1	7
Excessive optimism in strategic plans	101	2.78	1.97	1	7
Liquidity shortages	100	2.73	1.59	1	6
Lack of cost control	100	2.24	1.49	1	7
Oversized of fixed assets	101	2.2	1.57	1	6
High warehouse stock	100	2.2	1.57	1	7
Insufficient mandate processes	100	2.04	1.55	1	7
Ownership conflicts	101	1.78	1.33	1	7
Governance conflicts	101	1.75	1.29	1	7
Business succession conflicts	101	1.36	0.86	1	7

4.2 *The correlation between company age and causes of the crisis*

In order to answer the following research question - "Is corporate age associated with specific causes of the crisis?" – Pearson's and Spearman's correlations were employed to investigate the positive or negative association between age and external and internal causes of the crisis.

Table 5 shows only the significant Pearson's correlation values between company age and the causes of the crisis. Corporate age is positively associated with the global economic crisis (0.263**), industry-specific crisis (0.308**), and market-specific crisis (0.388**). But corporate age is negatively correlated with governance conflicts (-0.253*), ownership conflicts (-0.239*), insufficient mandate processes (-0.242*), and lack of data analysis (-0.256**).

Table 5. – The Pearson's correlation matrix between company age and causes of the crisis

Variables	**Global economic crisis**	**Industry crisis**	**Market crisis**	**Governance conflicts**	**Ownership conflicts**	**Insufficient mandate processes**	**Lack of data analysis**
Firm age	0.263**	0.308**	0.388**	-0.253*	-0.239*	-0.242*	-0.256**

**, ** significant at 0.05 and 0.01 levels (two-tailed test), respectively*

Table 6 shows only the significant Spearman's correlation values between company age and the causes of the crisis. In particular, corporate age is positively associated with external-environmental corporate causes such as the global economic crisis (0.269**), industry-specific crisis (0.319**) and market-specific crisis (0.289**). Instead, by focusing on internal firm-specific causes, corporate age is negatively correlated with insufficient mandate processes (-0.268**), ownership conflicts (-0.270**), and governance conflicts (-0.306**).

Table 6. – The Spearman's correlation matrix between company age and causes of the crisis

Variables	**Global economic crisis**	**Industry crisis**	**Market crisis**	**Insufficient mandate processes**	**Ownership conflicts**	**Governance conflicts**
Firm age	0.269**	0.319**	0.289**	-0.268**	-0.270**	-0.306**

*, ** significant at 0.05 and 0.01 levels (two-tailed test), respectively

Both correlations suggest interesting associations between corporate age and the external and internal causes of the crisis. Thus, the positive association between age and external causes would seem to indicate that older firms are more vulnerable to external shocks. In contrast, the negative associations between age and some internal causes (lack of data analysis, insufficient mandate processes, ownership and governance conflicts) would highlight that, for older firms, internal conflicts concerning governance, ownership and the lack of data analysis are not so relevant when identifying the firm's crisis and its consequent bankruptcy.

4.3. The main factors of external and internal causes

In order to answer the following research questions - "What are the key external causes of bankruptcy?" - and - "What are the main factors of internal causes?" - an EFA (exploratory factor analysis) was performed to aggregate the several external and internal causes contributing to the corporate crisis, as shown in table 7.

The EFA has identified three main components for external and internal causes, such as: planning activities, governance and ownership issues and economic and industrial crisis. First, to ensure sampling adequacy, a Kaiser-Meyer-Olkin (KMO) test confirmed a favourable result (External environmental and Internal firms-specific causes: KMO= 0.815): second, to ensure internal constancy, a Cronbach's alpha test was conducted with favourable results (External environmental and Internal firms-specific causes: $\alpha = 0.893$).

By focusing on the causes, the first factor, recognized as planning and programming activities, refers to issues pertaining to planning and programming activities, both operative and strategic, that cause a rigid structure, high costs, and raised financial requirements; the second factor, recognized as governance and ownership issues, concerns governance conflicts, ownership conflicts, and business succession conflicts; finally, the economic factor and industrial crisis concerns industry-specific, global economic, and market crises issues.

Table 7 - The EFA of the external and internal causes

Pattern Matrix			
Items	**Planning activities**	**Governance and ownership issues**	**Economic and industrial causes**
Lack of cost control	0.881		
Oversized fixed assets	0.844		
High fixed costs	0.794		
Insufficient mandate processes	0.730		
Excessive optimism of strategic plans	0.724		
Liquidity shortages	0.692		
Wrong strategic choices	0.691		
High warehouse stock	0.65		
Under-capitalization	0.629		
Inadequacy of credit management	0.586		
Lack of data analysis	0.586		
Inadequate management of financial needs	0.554		
High procurement cost of raw materials	0.515		
Debt increase	0.464		
Governance conflicts		0.995	
Ownership conflicts		0.948	
Business succession conflicts		0.547	
Stakeholder relationship quality		0.329	
Industry-specific crisis			0.927
Global economic crisis			0.840
Market-specific crisis			0.523
Cumulative variance %	13.6	41.6	48.6

KMO= 0.815

Extraction method: Exploratory Factor Analysis. Rotation method: Promax with Kaiser Normalization

4.4 Validity checks

Confirmatory factor analysis has been conducted to obtain evidence of the convergent and discriminant validity of the measurement scales. Results showed an acceptable model fit, $\chi 2$ (186) = 371.126, $p < .000$; comparative fit index (CFI) = .92, goodness-of-fit index (GFI) = .74, root mean square error of approximation (RMSEA) = .09.

We tested for convergent validity by checking that all significant (all t-values > 3.90) and substantial (all standardized parameters > .56) items loaded into the latent construct, as expected. Moreover, all constructs showed satisfactory levels of average variance extracted (AVE; all AVE values > .46) and composite reliability (all composite reliability values > .82).

Finally, as suggested by Fornell and Larcker (1981), the condition for discriminant validity among constructs has been verified. All AVEs were larger than any squared correlation among constructs (largest squared correlation = .29), suggesting that discriminant validity was achieved.

Therefore, table 8 shows confirmatory factor analysis results and table 8 reports correlations among latent constructs.

Table 8 - Confirmatory Factor Analysis Results

Items	Standardized loading	Construct	Average Variance Extracted	Composite Reliability
Lack of cost control	0.808	Planning activities	0.468	0.924
Oversized fixed assets	0.843			
High fixed costs	0.731			
Insufficient mandate processes	0.743			
Excessive optimism of strategic plans	0.693			
Liquidity shortage	0.670			
Wrong strategic choices	0.640			
High warehouse stock	0.655			
Under-capitalization	0.666			
Inadequacy of credits management	0.662			
Lack of data analysis	0.593			
Inadequate management of financial needs	0.645			
High procurement cost of raw materials	0.561			
Debt increase	0.605			
Governance conflicts	0.985	Governance and ownership issues	0.583	0.831
Ownership conflicts	0.967			
Business succession conflicts	0.542			
Stakeholder relationship quality	0.371			
Industry-specific crisis	0.981	Economic and industrial causes	0.629	0.829
Global economic crisis	0.760			
Market-specific crisis	0.569			

Table 9 - Correlations Among Latent Constructs

	Planning activities	Governance and ownership issues	Economic and industrial causes
Planning activities	1		
Governance and ownership issues	0.297	1	
Economic and industrial causes	0.129	-0.342	1

5. Discussion and conclusion

In light of the COVID-19 pandemic and the new Italian Crisis and Insolvency Code, this research sets out to investigate the causes, both external and internal, that lead to corporate crisis and consequent bankruptcy, and to acquire knowledge and act pre-emptively before the crisis becomes an irreversible insolvency. The main external factor causing the crisis is represented by the economic and industrial crisis. Rapid changes in technology, markets, politics, and social factors characterize the context in which the firms operate, increasing the complexity of firm management and underscoring the need to adapt to the environmental changes. Globalization has created a unique system where both financial and economic crises, along with health emergencies, spread throughout the world very quickly.

Instead, planning and programming activities, along with governance and ownership conflicts, are recognized as the main internal factors affecting a firm's crisis. Inappropriate planning activities may lead to expensive under/over-estimation as well as ineffective investments. In turn, wrong strategic choices may cause the over-optimistic plans, oversized assets as well as high warehouse stock, that increase financial needs. SMEs are often under-capitalized, and they must meet their ever-increasing financial needs through mostly bank debts. SMEs require developed management accounting systems, adequate administrative and organizational arrangements that guarantee timely information flows to support the decision-making processes (Palazzi et al., 2019; Bogarelli, 2020). The new Code of the crisis has properly identified the critical areas that make SMEs vulnerable. But the hurdles facing the spread of management accounting systems and adequate administrative and organizational arrangements are numerous (Sgrò et al., 2020) and are not to be underestimated.

It is clear that SMEs are exposed to a wide range of external and internal factors of varying complexity, which can lead to a crisis situation if their early signs are ignored or go unmanaged, such as issues related to the economic and industrial crisis, or market changes that are strongly characterized by unpredictability. Therefore, every company should implement an effective risk management system to ensure their survival and increase their ability to overcome uncertainties in order to reach their goals (de Araújo Lima et al., 2020).

Moreover, as shown by Pearson's and Spearman's correlations, the firm's age does not seem to favour bankruptcy; that is, the older companies would have a lower probability of being subjected to bankruptcy procedures (Carter and Van Auken, 2006; Palazzi et al., 2018), because of tangible, intangible, and financial resources' availability, and previous experiences that fed the learning process (Cucculelli, 2017; Quintiliani, 2017).

Conversely, the positive association between age and external causes would seem to suggest that older firms are more vulnerable to external shocks (Thornhill and Amit, 2003). In contrast, the negative association between age and some internal causes (the lack of data analysis, insufficient mandate processes, ownership and governance conflicts) would highlight that, for older firms, internal conflicts concerning governance and ownership and the lack of data analysis are not so relevant with respect to the crisis and the consequent bankruptcy. These findings show that external shocks could cause distress to older firms. It is a daunting problem in the ongoing health emergency situation, because the risk of bankruptcy concerns not only the youngest enterprises but also the oldest ones. Thus, public authorities should take into account these findings and provide support measures in favour of younger and older firms that have different necessities.

The managerial implications of the study are essential. Unfortunately, SMEs are characterized by insufficient managerial resources that deprive them of effective management systems, in addition to organizational and administrative arrangements. The new Italian Crisis Code and the emergency caused by COVID-19 will force SMEs to undergo a significant cultural change that will have to make enterprise management more professional, with more proactive decisions, and a more dynamic corporate system. The quality of management can make a difference, especially for SMEs.

Regarding the political implications, we can assert that public authorities should identify adequate support measures for both younger and older SMEs because the internal causes of the crisis seem to concern mostly younger ones, but external shocks cause distress mainly to older firms.

This study provides new recommendations for government and financial institutions which need to redirect their efforts towards helping and supporting young and old firms in overcoming financial distress and preventing a process of decline. These institutions could directly intervene during the crisis to avoid firms having to face liquidity shortages, especially with regard to young companies (Serrasqueiro et al., 2018). Firstly, on one hand, the bank system could ease their lending policy towards young firms rather than continue to financially support only companies that have considerable liquid assets. On the other hand, the government could institute a fund with the aim of helping to stimulate and support young firms' innovation and R&D to establish the path for potential economic growth. Secondly, government institutions could help firms promote and nourish commercial relationships with foreign partners to enrich firms' ability of recognizing and exploiting new opportunities. In this way, companies could gain access to new markets, business opportunities, avoid potential and temporal difficulties related to the local markets or industries, with the addition of increasing their survival chances during a crisis (Eggers, 2020).

Finally, governmental policies could be devoted to spreading knowledge about management accounting tools and practices capable of detecting firms' early signals of recession (López and Hiebl, 2015).

The lessons learnt are several:

- the concurrent causes of bankruptcy are numerous but the internal ones are referable to inadequate abilities and management systems; the new Italian Crisis and Insolvency Code tries to solve these deficiencies by fostering an organizational change and cultural development in SMEs;
- the external causes are very relevant and shocking because they could wipe out both younger and older firms; thus, the consequences are very risky for our economic system, especially during the current health emergency situation that represents an unpredictable external shock;
- the public authorities should take into account the differences between younger and older firms and promote *ad hoc* support measures;
- entrepreneurs should take advantage of this crisis and concentrate their efforts to favour change towards creating a company capable of successfully competing in the new context through sustainable development.

The main limit concerns the restricted sample size due to challenges in the data gathering process when considering the "bankruptcy status" of the sampled companies. Therefore, the results could be potentially influenced by the smaller sample and context, characterized by small-sized enterprises located in Urbino (characterized by a hilly and mountainous landscape and fairly secluded locations with poorly developed infrastructures). It would be interesting to extend the survey to other territories with different features. Additionally, the sample is drawn from a population of bankrupt enterprises. The inclusion of surviving firms would allow us to better understand the mortality dynamics.

References

Abdullah, N. A. H., Ahmad, A. H., Zainudin, N., & Rus, R. M. (2016), Modelling small and medium-sized enterprises' failure in Malaysia, *International Journal of Entrepreneurship and Small Business*, 28(1), 101–116.

Altman, E. I. (1968). Financial ratios, discriminant analysis and the prediction of corporate bankruptcy. *The Journal of Finance*, 23(4), 589-609.

Altman, E. I. (1984), The success of business failure prediction models: An international survey, *Journal of Banking & Finance*, *8*(2), 171-198.

Baldissera, A. (2019). Italian small-sized enterprise and procedures of warning crisis. *Piccola Impresa/Small Business*, (2).

Bhattacharjee, A., Higson, C., Holly, S., & Kattuman, P. (2009). Macroeconomic instability and business exit: Determinants of failures and acquisitions of UK firms. *Economica*, 76, 108–131.

Bogarelli, P. (2020). Punctual crisis assessment in SMEs: an applicative model. *Piccola impresa = Small Business*, (2).

Brugger, G. (1984). Gli interventi professionali nelle situazioni di crisi d'impresa. *Finanza, marketing e produzione*, (2), 190-208.

Brugger, G. (1986). I piani di risanamento nel quadro delle prospettive e dei vincoli dell'amministrazione controllata. AAVV., *Crisi di impresa e amministrazione controllata*, Milano, Giuffrè.

Coda, V. (1986). Crisi e risanamenti aziendali. Le tappe critiche dei processi di ristrutturazione aziendale di successo. *Sviluppo & Organizzazione*, 75, 29-44.

Camacho-Miñano, M. D. M., Segovia-Vargas, M. J., & Pascual-Ezama, D. (2015). Which characteristics predict the survival of insolvent firms? An SME reorganization prediction model. *Journal of Small Business Management*, *53*(2), 340-354.

Carter R., Van Auken H. (2006). Small Firm Bankruptcy. *Journal of Small Business Management*, 44(4), 493-512.

Ceccacci, F., & Devetag, G. (2014). Le medie imprese di fronte alla crisi: il caso Meccanotecnica Umbra SpA. *Piccola Impresa/Small Business*, (1).

Cerrato, D., Alessandri, T., & Depperu, D. (2016). Economic crisis, acquisitions and firm performance. *Long Range Planning,* 49, 171–185.

Cesaroni, F. M., & Sentuti, A. (2016). Strategie ambidestre e crisi economica: le peculiarità della piccola impresa. *Piccola Impresa/Small Business*, (1), 54-77.

Ciambotti M. (2005). *Governo strategico d'impresa. Teoria, modelli e sistemi di pianificazione.* Torino, Giappichelli.

Ciampi F., Gordini N. (2013). Small enterprise default prediction modeling through artificial neural networks: An empirical analysis of Italian small enterprises. *Journal of Small Business Management*, 51(1), 23-45.

Ciampi, F. (2015), Corporate governance characteristics and default prediction modeling for small enterprises. An empirical analysis of Italian firms, *Journal of Business Research*, 68 5, 1012-1025.

Ciampi, F. (2017), The potential of top management characteristics for small enterprise default prediction modelling, *WSEAS Transactions on Business and Economics*, 14, 397–408.

Ciampi, F. (2018). Using corporate social responsibility orientation characteristics for small enterprise default prediction, *WSEAS Transactions on Business and Economics*, 15, 113–127.

Colombelli, A., Krafft, J., & Quatraro, F. (2013). Properties of knowledge base and firm survival: Evidence from a sample of French manufacturing firms. Technological. *Forecasting and Social Change*, 80, 1469–1483.

Cucculelli, M. (2017). Crisi, apprendimento e governo dell'impresa. *Rivista Piccola Impresa/Small Business*, *1*, 9-31.

D'Aveni, R. A., & MacMillan, I. C. (1990). Crisis and the content of managerial communications: A study of the focus of attention of top managers in surviving and failing firms. *Administrative science quarterly*, 634-657.

de Araújo Lima, P. F., Crema, M., & Verbano, C. (2020). Risk Management in SMEs: a systematic literature review and future directions. *European Management Journal*, 38(1), 78-94.

Eggers, F. (2020). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of Business Research*, *116*, 199-208.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.

G. Zanda, M. Lacchini (1995). Le prime avvisaglie della crisi: strumenti di accertamento. Relazione al convegno Cirgis su Crisi di impresa: conflitti economici, aspetti solidaristici, problemi etici. Verso una riforma della Legge Fallimentare, Milano 23-24 giugno.

Gabbianelli, L. (2018). A territorial perspective of SME's default prediction models. *Studies in Economics and Finance*, 35(4), 542–563.

Gilbert, C. G. (2005). Unbundling the structure of inertia: Resource versus routine rigidity. *Academy of management journal*, *48*(5), 741-763.

Guatri L., (1995). *Turnaround. Declino, crisi e ritorno al valore,* Egea, Milano.

Haldma, T., & Laats, K. (2002), "Contingencies influencing the management accounting practices of Estonian manufacturing companies", *Management Accounting Research*, 13(4), 379–400.

López, L. O., & Hiebl, M. R. (2015). Management accounting in small and medium-sized enterprises: current knowledge and avenues for further research. *Journal of Management Accounting Research*, *27*(1), 81-119.

Lugovskaya, L. (2010). Predicting default of Russian SMEs on the basis of financial and non-financial variables. *Journal of Financial Services Marketing*, 14(4), 301–313.

Martinez, M. G., Zouaghi, F., Marco, T. G., & Robinson, C. (2019). What drives business failure? Exploring the role of internal and external knowledge capabilities during the global financial crisis. *Journal of Business Research*, *98*, 441-449.

Ooghe, H., & De Prijcker, S. (2008). Failure processes and causes of company bankruptcy: a typology. *Management decision*, 46(2), 223-242.

Pace, R. (2013). Piccole e micro imprese italiane tra crisi e vincoli finanziari: un'indagine empirica. *Piccola Impresa/Small Business*, (1).

Palazzi F., Ciambotti M., Gelsomini L. (2019). L'adozione dell'Activity-Based Costing nelle PMI: analisi di un caso. *Management Control*, n. 1.

Palazzi F., Sgrò F., Ciambotti M. (2018). Alle radici della crisi d'impresa durante la recessione economica globale: Focus sulle PMI italiane. *Rivista Piccola Impresa/Small Business*, n. 3.

Pierri, F., Burchi, A., & Stanghellini, E. (2013). La capacità predittiva degli indicatori di bilancio: un metodo per le PMI. *Piccola Impresa/Small Business*, (1).

Poli S. (2020), *I modelli di previsione della crisi d'impresa*, Giappichelli, Torino.

Quintiliani, A. (2017). The costs of SME's financial distress: a cross-country analysis. *Piccola Impresa/Small Business*, (3).

Riva, P., & Comoli, M. (2019). The impact of the new Italian Early Warning System provided by the IC-Code on SMEs governance. *Corporate Governance: Search for the Advanced Practices*, 65-67.

Serrasqueiro, Z., Leitão, J., & Smallbone, D. (2018). Small-and medium-sized enterprises (SME) growth and financing sources: Before and after the financial crisis. *Journal of Management & Organization*, 1-16.

Sgrò F., Palazzi F., Ciambotti M., Gelsomini L. (2020). Factors promoting and hindering the adoption of management accounting tools: empirical evidence from Italian manufacturing SMEs. *Management Control.* 1.

Szychta, A. (2002). The scope of application of management accounting methods in Polish enterprises. *Management Accounting Research*, 13(4), 401-418.

Thornhill, S., & Amit, R. (2003). Learning about failure: Bankruptcy, firm age, and the resource-based view. *Organization science*, *14*(5), 497-509.