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Bibliometric study on company closures: a look at scientific production during the last four decades*

Estudio bibliométrico sobre el cierre de empresas: una mirada a la producción científica durante las últimas cuatro décadas

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Abstract

The establishment of new companies has been fundamental to boosting the economic activity of nations; in this line, business mortality has been an outstanding object of study for research, thus allowing the expansion of discernment around this event, with the purpose of identifying causal relationships, effects and the main triggers of this phenomenon. Such knowledge aims to propose actions to mitigate business closures and their socioeconomic implications. The objective of this study is to examine the scientific production registered in the Scopus database in relation to the term company closure using a bibliometric approach. Among the main results obtained, 155 publications were found for the period 1982 to 2023, a remarkable increase from 2016 to 2022, which is the year with the highest scientific production in this subject. The most relevant author with three papers is Joseph Amankwah-Amoah and the institutions with the highest number of papers are Harvard University and The University of Tennessee with five each, which ratifies the United States as the country with the highest production, and the

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Journal Small Business Economics, stands out for the number of articles. Finally, co-occurrence networks of terms from the abstracts and keywords are presented. One of the main contributions of this work is the identification of the most relevant concepts associated with business closure, which are colloquially used indiscriminately, among them business failure, business mortality, discontinuity, insolvency, bankruptcy, and cessation of operations.

Keywords: Bibliometric Analysis, Business Failure, Business Mortality, Company Closures

Resumen

El establecimiento de nuevas compañías ha sido fundamental para impulsar la actividad económica de las naciones, en esta línea, la mortalidad empresarial ha sido un objeto de estudio destacado para la investigación, permitiendo así la expansión del discernimiento en torno a este acontecimiento, con el propósito de identificar relaciones causales, efectos y los principales detonantes de este fenómeno. Dicho conocimiento apunta a proponer acciones para atenuar el cierre de empresas y sus implicaciones socioeconómicas. El objetivo de este estudio es examinar la producción científica registrada en la base de datos Scopus, en relación con el término cierre de empresas, utilizando un enfoque bibliométrico. Entre los principales resultados obtenidos se hallan 155 publicaciones para el período 1982 a 2023, observando un incremento notable a partir del 2016 y siendo el 2022 el año de mayor producción científica en esta temática. El autor más relevante con tres trabajos es Joseph Amankwah-Amoah, y las instituciones con mayor número de documentos son Harvard University y The University of Tennessee con cinco cada una, lo que ratifica a Estados Unidos como el país con mayor producción y el Journal Small Business Economics, se destaca por el número de artículos. Finalmente se presentan redes de co-ocurrencia de términos a partir de los resúmenes y palabras clave. Una de las principales contribuciones de este trabajo es la identificación de los conceptos más relevantes asociados con el cierre empresarial y que coloquialmente se emplean de forma indiscriminada, entre ellos: fracaso empresarial, mortalidad empresarial, discontinuidad, insolvencia, bancarrota y cese de operaciones.

Palabras Clave: Análisis Bibliométrico, Cierre de Empresas. Fracaso Empresarial, Mortalidad Empresarial

SUMMARY

INTRODUCTION. - RESOLUTION SCHEME. - I. Research problem. - II. Methodology. - III. Writing plan. - Background. - 2. Concepts associated with business closing - IV. Research results. - CONCLUSIONS. - REFERENCES.

Introduction

To be born, to grow, to mature, and to die stages of the life cycle of human beings and organizations, which, by survival instinct, invest a great deal of time and resources seeking to avoid the end, in this case, the moment of closure, seen by many as a failure in management. However, the closure of companies is not always motivated by negative situations or by the non-fulfillment of the proposed objectives; on other occasions, it is determined by the will of the entrepreneur who decides to dedicate himself to other work or to take advantage of new opportunities.

Taking into account that “more than half of the companies created fail in the first five years” (Organisation for Economic Co-Operation and Development (OECD), 2016, p. 84), business mortality becomes an important topic of study that has been approached different perspectives, among them the legal one, being the cancellation or liquidation of the legal act through which

it was created, the instrument with which it is certified. From the financial point of view, the closure is materialized through the declaration of bankruptcy or bankruptcy, which is considered as the inability to meet the financial obligations. The specific expression to be applied depends on the country and its regulations.

Organizational management and performance are another dimension of analysis of business mortality, alluding to strategic, planning, and organizational processes aimed at competitiveness and sustainability. Finally, another approach is from the prediction models, statistical models that seek to predict the duration of the company over time, taking into account endogenous and exogenous variables, the most prominent being those proposed by Kaplan-Meier and Cox (Collett, 2015).

The challenge facing companies today is to stay afloat and establish themselves in the marketplace. However, this mission is becoming increasingly arduous due to the obstacles they must overcome in a constantly changing environment. Reducing business mortality is crucial to ensure economic growth and the strengthening of a country's business fabric, hence the importance of understanding the behavior of the research and publications recorded in Scopus in relation to the term business closure, using the methodology of bibliometric analysis.

Resolution scheme

1. Research problem

What has been the dynamic of scientific production around company closures over the last forty years?

2. Methodology

The methodological approach of this study was quantitative, with an exploratory and descriptive scope, using the indicators of a bibliometric analysis, which is based on the quantitative study of scientific production through unidimensional and multidimensional measures (Van-Raan, 2005). The purpose is to evaluate the dynamics of the phenomenon under study with respect to production, authors, countries, institutions, trends, relevance, collaboration, and citations, among others (Van-Leeuwen, 2004).

The data source consulted to obtain the sample was Scopus, which, according to (Elsevier, 2023, para. 1), “uniquely combines a comprehensive database of expert-selected citations and abstracts with enriched data and linked scholarly literature from a wide variety of disciplines.” Different combinations of key terms associated with company closings and filtering by knowledge areas of business and economics were evaluated until the following search equation was achieved: (TITLE-ABS-KEY (“business shutdowns” OR “company shutdowns” OR “enterprise shutdowns”) OR TITLE-ABS-KEY (“business closure” OR “company closure” OR “enterprise closure”) OR TITLE-ABS-KEY (“business closedown” OR “company closedown” OR “enterprise closedown”) OR TITLE-ABS-KEY (“business close-down” OR “company close-down” OR “enterprise close-down”) AND (LIMIT-TO (SUBJAREA, “BUSI”) OR LIMIT-TO (SUBJAREA, ‘ECON’))). As a result, 155 records were imported into the Bibliometrix software for analysis.

3. Writing plan

3.1 Background

Previous studies that were similar to this research were reviewed with respect to the object of study, company closures, and the methodology used, and the publications found are presented in Table 1. In the four documents that precede this study, there are bibliometric analyses that cover a wide observation window from 1935 to 2016, and in which valuable quantitative metrics are presented that contribute to the understanding of the subject; however, such studies are limited with respect to the conceptualization and differentiation of the words associated with business closure, this situation being one of the motivating factors for the present research.

Table 1. Background

Autor(s)	Nombre	Muestra	Ventana	Consideraciones
De-Los-Ríos, J. A. S., Figueroa- Marín, E., & Caballero-Olaya, S. M	Fracaso Empresarial: Análisis Bibliométrico	382 documents	No time restriction	To examine research trends in business failure.
Fernández-Portillo, A, Díaz-Casero, J. C., Sánchez-Escobedo, C. & Hernández-Mogollón, R	Conocimiento certificado del fracaso empresarial: un análisis bibliométrico del periodo 1965-2012	292 documents	1965 - 2012	Identify factors associated with business failure through bibliometric methods.
Kücher, A., Feldbauer-Durstmüller, B., & Duller, C.	The intellectual foundations of business failure: a co-citation analysis	309 documents	1935 - 2013	The studies on business failure are analyzed in order to obtain a structured view, finding three major groups: predictive models, finance and law, organizational failure, and business failure.
Kücher, A	Organizational Failure: Bibliometric analyses of the field and age dependent explanations for SME failure - Empirical evidence from Upper Austria [Doctoral Thesis]	181 documents	Companies in Austria that filed for insolvency in 2012 for empirical research. Bibliometric 1993 - 2016	The first analyzes the internal structure of the literature on business failure, and the second empirically investigates the relationship between the causes of insolvency in small and medium-sized enterprises and the ages of these enterprises.

Source: own elaboration based on Fernández-Portillo, Díaz-Casero, Sánchez-Escoedo & Hernández-Mogollón (2019); De-Los-Ríos, Figueroa-Marín & Caballero-Olaya (2017); Kücher, Feldbauer-Durstmüller & Duller (2015) and Kücher (2018).

3.2 Concepts associated with business closing

The starting point of this research consisted of recognizing the different words and conceptualizations that exist regarding the business shutdown, taking into account that in the literature review, different topics were found that allude to the moment or event of business closure and that are used as synonyms (Everett & Watson, 1998); (Headd, 2003); (Ucbasaran, Shepherd, Lockett, & Lyon, 2013). Commonly, these concepts are loaded with a negative connotation and associated with failure, with the aim of understanding the different expressions and the perspective from which they are applied in the business context; the most relevant definitions for this work are presented below.

The terms used as generic terms are a business failure and business closure; however, from the financial point of view, the concepts of insolvency are used as a transitory state and prior to bankruptcy, understood as the failure to meet the proposed financial objectives, resulting in difficulties and impossibility to pay the debts of the company. (Gimeno, Folta, Cooper, & Woo,

1997); (Headd, 2003); (Mellahi & Wilkinson, 2004); (Balcaen & Ooghe, 2006); (Ucbasaran et al., 2013). These drawbacks are usually manifested in the business operation with the probability of bankruptcy as a financial indicator, as pointed out by Dichev (1998) cited by (Orellana-Osorio, Clavijo, Cevallos-Rodríguez, Tonon-Ordóñez & Pinos-Luzuriaga, 2020).

The cessation (discontinuance) of operations can also occur by the deliberate decision of the entrepreneur (Amankwah-Amoah, 2016), cited by (Kücher, 2018), who resolves to take other directions and invest their resources, time, and effort in new projects (Gimeno et al., 1997); (Headd, 2003). Associated with this concept is that of change or discontinuance of the ownership, where technically there is no company mortality; these changes can be caused by low financial performance, which does not meet the expectations of the entrepreneur, or because the expected growth is not visualized in the future. In this sense, the motivations for selling or transferring ownership may be due to purely personal reasons such as conflicts between partners, family issues, reaching retirement age, and geographic mobility, among others (Días & Teixeira, 2017).

4. Research results

The most relevant results in terms of productivity by year, countries, universities, journals, and authors obtained from the bibliometric analysis are presented below. Table 2 shows a total of 155 documents, a growth rate in annual production of 7.58%, and a total of 352 authors with a participation per document of 2.39, among other figures of interest. It is clarified that the observation time was not delimited to a specific scale by the decision of the authors due to the fact that it was intentionally expected to find the year of the beginning of the publications registered in Scopus according to the search equation used.

Table 2. Dataset Summary

Description	Results
Period	1982 a 2023
Sources (Journals, books, and others)	140
Documents	155
Annual growth rate	7,58
Average document age	6,11
Average number of citations per document	20,88
Authors	352
Co-authors per paper	2,39
Percentage of co-authorships	25,16
Articles	133
Books	4
Book chapters	7
Paper	4
Editorial	1
Note	2
Review	4

Source: own elaboration based on Scopus data using Bibliometrix (2023).

Regarding the annual scientific production, production peaks were observed in the years 2009, 2012, and 2014; in the previous years, stable production was denoted. However, the year 2016 marks a growth trend, indicating the relevance of the subject in recent years and even due to the Covid-19 pandemic (Table 3).

Table 3. Annual scientific production

Year	Articles
2023	20
2022	31

2021	25
2020	15
2019	8
2018	9
2017	3
2016	1
2015	4
2014	5
2013	1
2012	5
2011	0
2010	3
2009	6
2008	1
2007	1
2006	1
2005	2
2004	0
2003	2
2002	2
2001	2
2000	2
1999	0
1998	0
1997	2
1996	1
1995	0
1994	0
1993	0
1992	0
1991	0
1990	0
1989	0
1988	0
1987	0
1986	0
1985	0
1984	2
1983	0
1982	1

Source: own elaboration based on Scopus data using Bibliometrix (2023).

In relation to the production by country, this production is in accordance with the number of author demonstrations by country of affiliation according to a color scale where blue represents the highest intensity and gray the lowest; the United States stands out with the highest production, while in South America, Colombia and Brazil (Figure 1).

Rose, Adam	2
Wei, Dan	2
Zhang, Hongxu	2

Source: Own elaboration from Scopus data using Bibliometrix (2023).

Regarding the journals with the highest production, Table 6 shows the first ten journals, with Small Business Economics standing out with four documents.

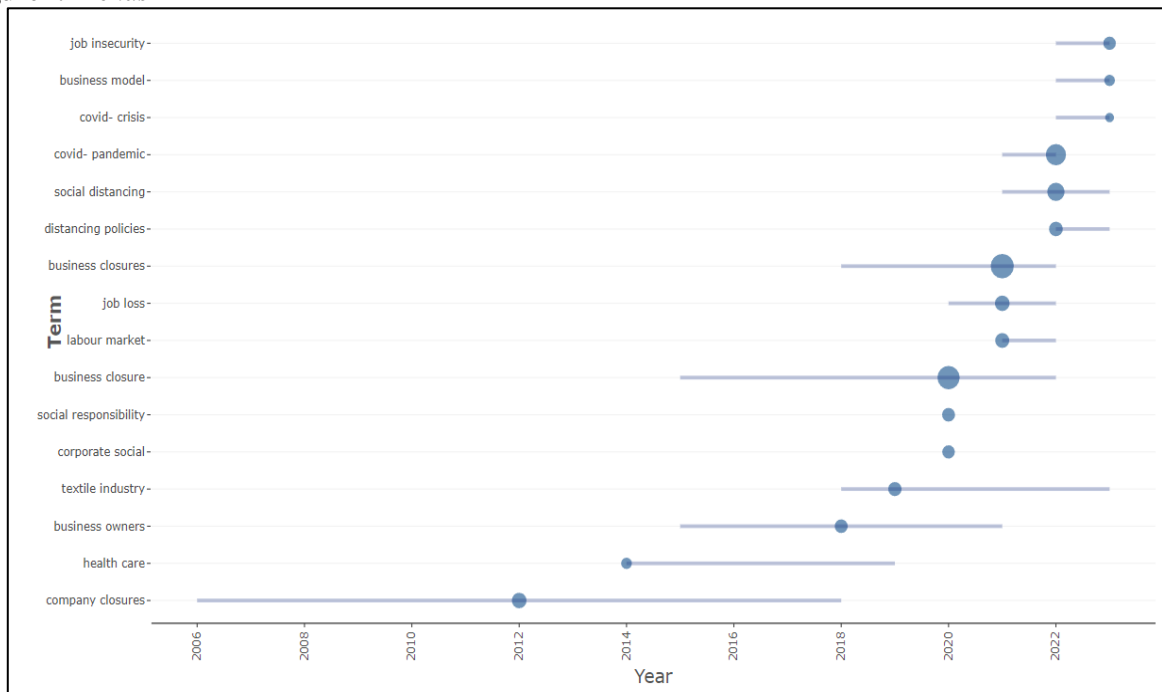
Table 6. Most relevant journals

Journals	Articles
Small Business Economics	4
African Journal of Hospitality, Tourism and Leisure	2
Applied Economics Letters	2
Environmental and Resource Economics	2
Industrial Marketing Management	2
International Journal of Hospitality Management	2
Journal of Banking and Finance	2
Journal of Business Research	2
Journal of Economic Behavior and Organization	2
Journal of Population Economics	2

Source: own elaboration based on Scopus data using Bibliometrix (2023).

Regarding the trends found from the abstracts of the documents, Figure 2 shows that since 2006, some concepts have been maintained for a long period as business closure, while during the last three years, other concepts associated with the Covid-19 pandemic appeared, suggesting that business mortality on some occasions was due to this crisis.

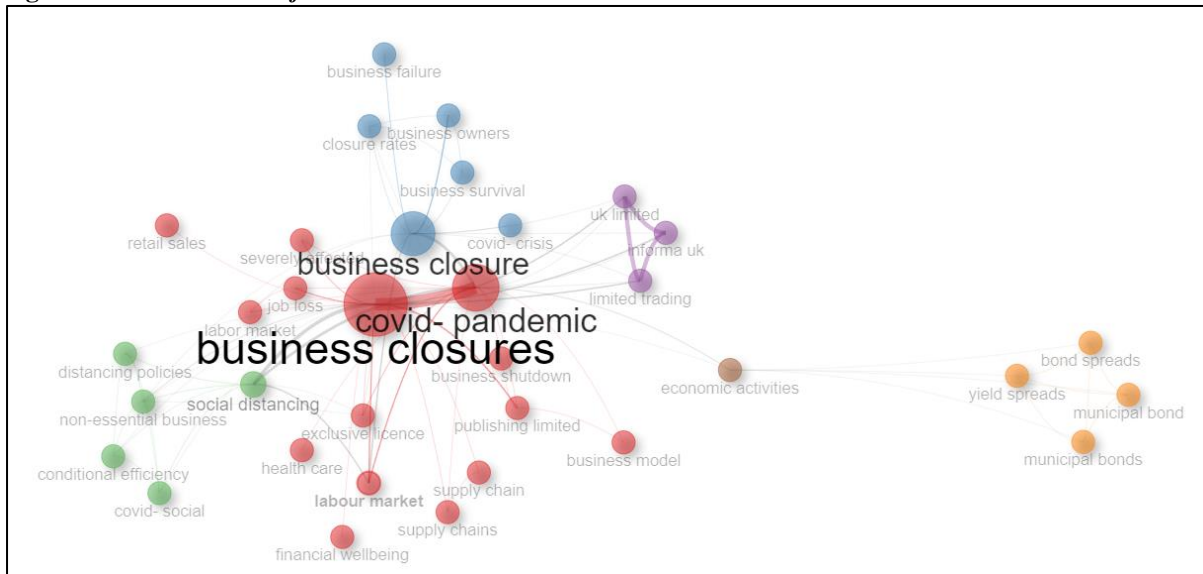
Figure 2. Trends



Source: Own elaboration from Scopus data using Bibliometrix (2023)

Figure 3 shows the co-occurrence networks of terms constructed from the abstracts of the dataset studied, groups or clusters associated with the different concepts to refer to business closure, and one very marked with the Covid-19 crisis.

Figure 3. Co-occurrence of terms



Source: own elaboration based on Scopus data using Bibliometrix (2023).

Conclusions

The findings obtained allow updating the knowledge on the closure of companies, being this a critical phenomenon that affects economic development and on which it is necessary to deepen in its causes, determinants, and promoters in order to design strategies from public policy with the aim of mitigating its negative impact.

One of the main contributions of this work consists of updating the subject, taking into account that the studies taken as background analyze the international scientific production up to 2016, which means that this is a pre-pandemic look, contrary to the above, the bibliometrics presented here includes publications up to the year 2023, the window of observation of the last four decades, which includes 2019, the year in which the first contagions were detected, and 2020, the year in which the World Health Organization officially declared the pandemic generated by Covid-19, and it is well known that the health and socioeconomic crisis triggered corporate mortality.

In general, there are several perspectives from which the phenomenon of business closure is studied, among them the legal and financial context, strategic management, and predictive models. Normally, the connotation and value judgment associated with the closure of companies is negative. However, there are a series of personal decisions of the entrepreneur that are due to his will to close his company, motivated by situations that in the future may trigger positive results, for example, the sale of the company.

Due to the impact that the topic generates in economic development and by means of quantitative methods and its visualization using graphic tools, the identification of value connections, concentrations, and trends on the topic as a research topic is facilitated. Despite the relevance of business closure, specific studies have yet to be found for Latin America or

Colombia, which invites us to reflect and propose future works on the subject for this geographical context.

The main limitation of this research is the dispersion of terms that are used as synonyms and the fact that even in their translation into other languages, they mean the same thing, which makes the selection of keywords and the appropriate combination in the search equation difficult. It is also recommended that future research include other databases in addition to Scopus.

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