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Premature Mortality in Exponential Times: The Impacts of the Digital Era on Business Failure

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PREMATURE MORTALITY IN EXPONENTIAL TIMES: THE IMPACTS OF THE DIGITAL ERA ON BUSINESS FAILURE

1. INTRODUCTION

The digital era, driven by the rapid evolution of technologies such as artificial intelligence, big data, cloud computing, and digital applications (Mladenova, 2024; Pu & Zulkafli, 2024; Saadatmand et al., 2022; Verhoef et al., 2021), represents a profound and multifaceted transformation that redefines the global business landscape (Awad et al., 2024; Ferraro & Cristiano, 2021; Pu & Zulkafli, 2024; Saadatmand et al., 2022; Verhoef et al., 2021). This era fundamentally alters consumer expectations and behaviors, with a shift toward online channels and an increase in digital touchpoints (Verhoef et al., 2021). Consequently, companies face immense pressure (Mladenova, 2024; Verhoef et al., 2021), leading to the disruption of traditional markets and the intensification of competition (Perez, 2009; Pu & Zulkafli, 2024; Verhoef et al., 2021), with the emergence of large digital players that dominate industries and shift market boundaries (Verhoef et al., 2021). The diffusion of these technologies is a turbulent process that renders established models and existing skills obsolete, which is not easily assimilated, generating intense resistance (Perez, 2009).

To navigate this environment, organizations are compelled to redefine their strategies and identities (Ferraro & Cristiano, 2021; Verhoef et al., 2021), seeking the creation of new digital business models and the transformation of processes and operations to optimize efficiency and change business logic (Ferraro & Cristiano, 2021; Mladenova, 2024; Pu & Zulkafli, 2024; Verhoef et al., 2021). This requires the development or acquisition of specific digital resources and capabilities, such as agility, big data analytics capability, and Information and Communication Technology (ICT) infrastructure (Verhoef et al., 2021), as well as more agile and flexible organizational structures (Verhoef et al., 2021) and a digital culture willing to take risks (Mladenova, 2024; Verhoef et al., 2021). However, this shift imposes significant challenges and barriers, including legacy systems, internal resistance, lack of adequate resources, and the difficulty of competing (Ferraro & Cristiano, 2021; Mladenova, 2024; Verhoef et al., 2021), while sensitive sectors face critical risks related to data confidentiality and security (Awad et al., 2024). Failure to adapt to these changes can lead to replacement by companies that leverage technologies (Verhoef et al., 2021).

In parallel, business mortality constitutes a complex and multidimensional phenomenon of considerable relevance in academic research in recent years (Issor, 2018). The mortality of startups, for example, is a phenomenon known in the literature as the Valley of Death (Gbadegeshin et al., 2022; Zapata-Molina et al., 2022). This term describes the challenging period at the beginning of a company's life (Gbadegeshin et al., 2022), usually within the first 5 years of operation, where vulnerability is higher and failure rates are elevated, making the Valley of Death a critical gap between the early stages of funding or research and the achievement of profitability or commercial success (Gbadegeshin et al., 2022; Zapata-Molina et al., 2022). Studies indicate that approximately 50% of startups do not survive the first 5 years (Karani & Mshenga, 2021; Zapata-Molina et al., 2022) and that only one in ten has a chance of success (Wimal et al., 2023). This scenario is driven by various obstacles, such as limited resources, lack of market knowledge, and financial constraints (Navarro-Castillo et al., 2024; Zapata-Molina et al., 2022). High-tech companies face even greater challenges, especially when they are new and inexperienced, introducing products or services in a highly uncertain environment (Navarro-Castillo et al., 2024).

Although the Valley of Death phenomenon is prominent in discussions about startups and early-stage companies, highlighting the high mortality rate in the early years of operation (Karani & Mshenga, 2021; Zapata-Molina et al., 2022), the challenge of business survival and sustainability extends throughout the entire life cycle of an organization and affects companies of various sizes and types. In Brazil, 60% of companies close their operations before reaching five years (Sebrae, 2023). Small and Medium Enterprises (SMEs) and Micro, Small, and Medium Enterprises (MSMEs) (Mladenova, 2024; Wulandari et al., 2025; Yasa, 2024), as well as established and even large companies (Omol, 2024; Verhoef et al., 2021), face ongoing obstacles that can compromise their long-term viability. These challenges include the need to adapt to constantly changing market environments, the adoption and integration of new technologies (Mladenova, 2024; Omol, 2024; Verhoef et al., 2021; Wulandari et al., 2025), resource constraints (Gbadegeshin et al., 2022; Navarro-Castillo et al., 2024), and maintaining competitiveness (Mladenova, 2024). For family businesses, for example, transgenerational continuity and value preservation over time represent a central focus of sustainability, going beyond mere initial survival (Ferraro & Cristiano, 2021).

Despite recent advances in business mortality research, a significant gap still exists in the literature, as no studies have been found that comprehensively and systematically integrate the multiple vectors of digital transformation (technological, strategic, cultural, and regulatory) with the various factors that lead to business closure (Verhoef et al., 2021). The existing academic production appears fragmented across sectoral, geographic, or methodological lines, which hinders the construction of a holistic overview that explains why some organizations succumb while others manage to accelerate their adaptation (Verhoef et al., 2021). Gbadegeshin (2022) focuses directly on how to overcome the Valley of Death. Karani (2021) explores the sustainability of startups in their early years of operation from the perspective of analyzing and controlling the risks that impact their survival, such as market, technical, product, or service risks. Navarro-Castillo et al. (2024) examine the use of open innovation for the survival of startups, with the main perspective of identifying, based on the experience of successful entrepreneurs, the crucial factors for overcoming the Valley of Death, investigating the role of open innovation, entrepreneurial background (human capital, experience), and financial and social support. Zapata-Molina (2022) presents a systematic literature review on the Valley of Death in startups, identifying its definition, the main causes such as lack of venture capital, lack of market knowledge, lack of resources, personnel, poor management, and the ways to overcome it, such as specialized human capital, promotion of venture capital, and public policies. Other sources discuss business challenges, sustainability, and digital transformation in SMEs or larger companies, such as Ferraro & Cristiano (2021), Mladenova (2024), Omol (2024), Verhoef et al. (2021), Wulandari et al. (2025), and Yasa (2024), but without a direct connection between the impacts of the digital era and the causal rationale of business mortality.

This gap undermines the consolidation of a robust theoretical body on the phenomenon, making it difficult to identify cause-and-effect relationships between the adoption (or lack) of digital practices and business survival. The absence of comparative syntheses also limits the development of predictive metrics and early diagnostic frameworks, perpetuating reactive rather than proactive strategic decisions. Ultimately, the current gap in the literature prevents a full understanding of how contextual factors, such as sectoral digital maturity, modulate the effects of digital transformation on business mortality, leaving room

for future research agendas. These gaps indicate a clear need for a systematic literature review that not only synthesizes existing research but also critically examines the impacts of the digital era on the phenomenon of business mortality.

Based on this challenge, this article seeks to answer the following research questions: Why do companies die in the digital era? Which aspects of the digital era are related to this phenomenon? To this end, this work develops a systematic literature review of 70 studies that explore the causes of business failure from 2015 to 2024 and provides a categorization of the causes that led companies to their demise. As results, this research offers three central contributions to the field of business mortality in the digital era. First, by gathering and systematizing evidence from studies over the past ten years, it integrates, for the first time, the classic categories of failure (finance, strategy, market, competition, and regulation) with vectors of digital transformation, demonstrating how technologies, data, and new regulations amplify historical vulnerabilities. Second, it shows that the scarcity of financial resources functions mostly as a consequence and not as a primary cause of poorly calibrated strategic decisions, competitive pressures, or legal shocks, shifting the debate from a symptomatic view to a systemic perspective. Finally, by exposing empirical gaps, the study establishes a future research agenda that encourages longitudinal and comparative investigations on business resilience in contexts of rapid digitalization.

2. METHOD

There are several methods for conducting literature reviews in the social sciences, such as integrative, semi-systematic, and systematic reviews (Snyder, 2019). A systematic review is appropriate for this study, as it maps a research area, synthesizes current knowledge, and develops an agenda for future research (Petticrew & Roberts, 2006; Snyder, 2019). The methodology follows the guidelines of the PRISMA statement, which outlines rigorous procedures for identifying, selecting, evaluating, and synthesizing studies (Page et al., 2021). This approach emphasizes careful planning and explicit documentation prior to the literature search, ensuring integrity, accountability, and accuracy (Moher et al., 2015). The PRISMA 2020 checklist recommends addressing eligibility criteria, search strategy, and selection processes (Page et al., 2021). PRISMA employs systematic methods to identify, select, critically appraise, extract, and analyze data from relevant research (Higgins, 2011). This process produces minimum evidence-based research results for reporting (Moher et al., 2009). Researchers can examine findings with transparency, consistency, and high-quality standards (Harden et al., 2018). This guideline was chosen for relevant and appropriate analyses regarding the quality and accuracy of a review (Ridhwan & Jamal, 2020).

Two databases, Web of Science and Scopus, served as search sources for this study due to their broad coverage and efficient search refinement capabilities (Salisbury, 2009). Three axes were used: the first was ‘company’ and its synonyms sufficient to identify any type of business, except individual micro-entrepreneurs, using the logical operator OR to connect the word with its related terms, namely: (“startup*” OR “compan*” OR “venture*” OR “start-up” OR “spin-off” OR “spinoff” OR “SMB*” OR “SME*” OR “business” OR “firm”); the second sought to locate articles addressing terms related to failure, death, or business closure (“fail*” OR “bankruptcy” OR “closure” OR “death” OR “unsuccessful” OR “performance decline” OR “underperformance” OR “scalability issue*” OR “problem*”); the third construct aimed to identify articles addressing the justification of the causes of such

failures (“cause” OR “reason” OR “determinant” OR “explanation” OR “motive” OR “justification” OR “rationale”). To connect the constructs, a proximity operator was used—a technique that allows the retrieval of two or more words appearing within a certain number of words from each other (Bartol, 2023; Mokhtar et al., 2023). In Scopus, the proximity operator used was W/5, considering a distance of up to 5 words between terms from the constructs. In Web of Science, the corresponding proximity operator used was NEAR/5.

The filters applied to this research include publication period, language (Portuguese and English), type of publication, and subject areas. For the time frame, publications from the last ten years were considered—a period marked by the growth of technologies such as Cloud Computing, which enabled scalable storage and processing; Big Data and Artificial Intelligence, which became central themes for business and research; and the Internet of Things (IoT), connecting billions of devices around the world (Brynjolfsson & McAfee, 2016). The type of publication considered was articles, especially peer-reviewed ones. The subject areas considered in Scopus were Business, Management and Accounting, and Economics, Econometrics and Finance; and in Web of Science, they were Business, Management, and Economics.

The initial search yielded a total of 3,322 publications identified in the databases—2,894 in Scopus and 428 in Web of Science. The results were exported, integrated, and normalized to eliminate duplicates between databases, using title, DOI, and year of publication as identification criteria. A total of 26 duplicate articles were found and removed, and inclusion filters were applied, resulting in a dataset of 399 publications, which underwent an initial screening based on title, abstract, and keywords. After screening, 130 articles most relevant to the study were selected, but only 88 were available for download. These were read in full and evaluated, with some rejected based on the exclusion criteria, resulting in a final dataset of 70 articles that compose the corpus of this study.

The inclusion criteria considered only articles grounded in empirical evidence (quantitative, qualitative, or mixed methods), excluding purely theoretical articles, those addressing bankruptcy caused by fraud, ethical scandals, or exclusively legal factors, articles in which the main cause of failure was the COVID-19 pandemic, and articles that did not reveal causes of failure.

To group the causes of business mortality, a thematic categorization procedure was adopted, inspired by the structured approach of Gioia et al. (2013). In a first inductive stage, open coding of each article was carried out, generating an initial set of descriptive codes based on the causes from the CB Insights (2021) study, which were expanded as new elements emerged from the analysis. Subsequently, these codes were compared, merged, and refined, giving rise to first-order concepts. Finally, the resulting categories were cross-checked with the support of SciSpace, refined, and used for the analysis of failure patterns.

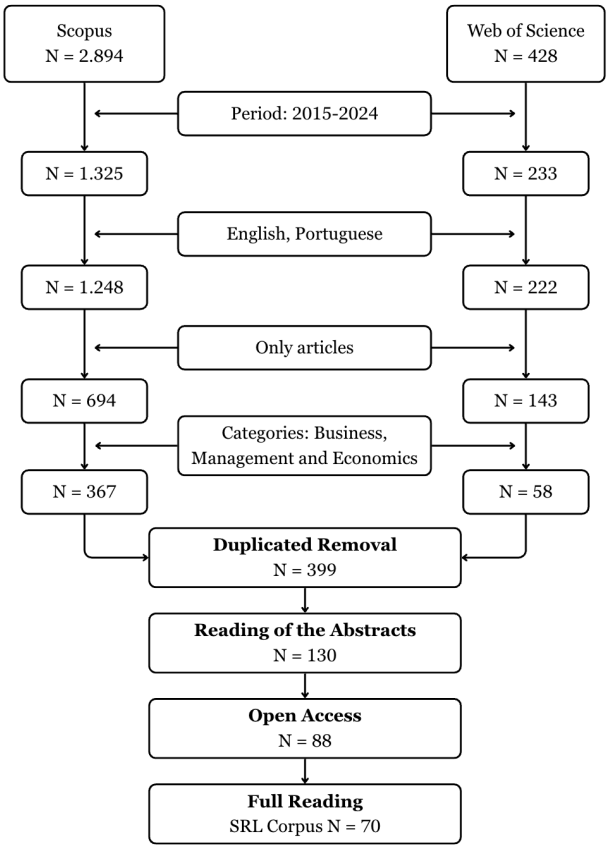

Figure 1 – PRISMA Flow

3. RESULTS

The creation of decision domains or categories was fundamental as a starting point for the study, using the approach suggested by Gioia et al. (2013), which ensures qualitative rigor in data analysis.

The codebook was developed based on two sources: primarily using as a reference the main causes of startup failure published by CB Insights (2021), and secondly, as new themes emerged from the articles analyzed, new codes were added. This phase involved a thorough examination of the literature to identify key themes, resulting in the primary list of categories (Table 1). As the studies typically address more than one cause of failure, each article was categorized under 2 to 5 themes, ultimately resulting in eight distinct themes, including: financial problems, competition, strategy management, the ability to meet market needs, legal or governmental challenges, knowledge and skills of the team or the founder/CEO, problems dealing with innovation, a poor and unattractive product, the challenge of dealing with new technologies, having developed a product for which there is no market demand—nobody wants it!, issues in cost management and product or service pricing, marketing strategy problems, cultural resistance, lack of alignment between investors and the team, absence of a succession plan—especially in family businesses, poor location, family conflicts—again in family businesses, and finally, a pivot strategy that did not work.

The categorization was carried out in three stages: the first, after reading each of the texts, in which the articles were classified according to the relevant themes; the second, using the artificial intelligence tools of SciSpace, which coded the entire dataset; and finally, the discrepant categorizations were cross-checked to make a final decision on the most appropriate classification according to the context.

Tabel 1 – Codebook (Causes of Business Mortality)

Category	**Description**	**Source**
Bad location	Poor choice of business location (affects logistics, poor receptivity, high associated costs, etc.)	CB Insights (2021)
Business model	Problems in defining the business model, lack of clarity in the value proposition, offer creation, etc.	CB Insights (2021)
Competition	Outcompeted or cornered by competitors	CB Insights (2021)
Disharmony team/ investors	Clash of ideas between investor intentions and the established culture	CB Insights (2021)
Failure do pivot	Pivot strategy did not work as expected	CB Insights (2021)
Financial Issues	Ran out of money, financial problems	CB Insights (2021)
Handle Makert Needs	Difficulty in addressing new market needs	CB Insights (2021)
Innovation	Problem in creating new avenues of value	Literature review
Legal Challenges	Legal and governmental challenges	CB Insights (2021)
Marketing Strategies	Problems in defining and/or executing the strategy	CB Insights (2021)
Knowledge & Skills	Founders/team background, previous professional experience and/or education, skills	Literature review
No market need	No one needs the product launched	CB Insights (2021)
Not the right team	Unengaged, unprepared, and uncommitted team	CB Insights (2021)
Pivot gone bad	The pivot strategy ultimately turned out to be a failure	CB Insights (2021)
Poor product	Product does not meet market needs	CB Insights (2021)
Pricing/cost Issues	Pricing/cost issues making the operation unviable	CB Insights (2021)
Strategy Mgmt	Strategy design, deployment, and execution	Literature review
Lack of succession plan	Lack of succession plan for family businesses	Literature review

3.1 Causes of Business Mortality

This section presents the causes of business mortality, their definitions, the included articles, and the reported effects of these domains on the causes of business failure. Figure 2

displays the ranked categories based on the observed frequency in the final literature sample (N = 70). It is evident that financial problems are identified as the leading cause of business closure, with a frequency of 68.6%. Factors related to competition occupy the second position at 21.4%, while strategic management and skills to address market needs and legal challenges share the third position with 10.0% each. In fourth and fifth place are knowledge and skills (7.1%) and innovation (5.7%), respectively.

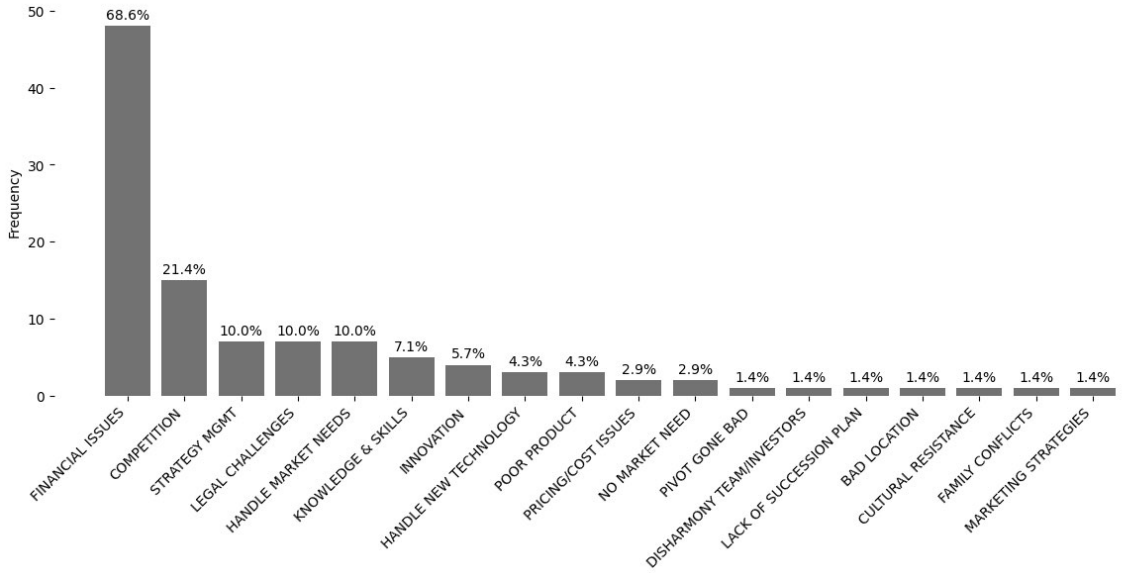

Figure 2 - Relative frequency of business failure categories based on the systematic literature review

Table 2 presents a detailed account of occurrences based on frequency versus the final analysis corpus, while Table 3 displays the thematic categorization of each study. It is important to emphasize that there is no simple or single answer when it comes to understanding business mortality (Costa et al., 2023; Elexa et al., 2022; Gilley, 2024; Kücher et al., 2020; Muñoz-Izquierdo et al., 2019). This complex phenomenon is influenced by a wide range of internal and external factors that interact interdependently (Al-Shami, 2020; Amankwah-Amoah, 2015; Gilley, 2024; Pathania & Tanwar, 2024). Poor financial management (Gupta et al., 2018; Mthiyane, 2022), lack of strategic planning (Alam et al., 2024), failures in technological adaptation (Elexa et al., 2022), changes in consumer behavior (Hayrapetyan, 2024), regulatory pressures (Alam et al., 2024), economic crises (Anghel, 2020), and even characteristics of the competitive environment (Bennett, 2016) may contribute to the closure of an organization's operations, either individually or in combination. Each case presents a unique combination of variables, making it difficult to determine a linear causality (Costa et al., 2023; Elexa et al., 2022; Gilley, 2024; Makropoulos et al., 2020; Mouhtat & Touhami, 2024; Muñoz-Izquierdo et al., 2019; Pathania & Tanwar, 2024; Thorén, 2019).

Table 2 – Calculation of relative frequency of business failure causes

Categorization	Calculation	Categorization	Calculation
1. Financial issues	48/70 = 0.6857	10. No market need	2/70 = 0.0285
2. Competition	15/70 = 0.2142	11. Pricing/cost issues	2/70 = 0.0285
3. Strategy management	7/70 = 0.1000	12. Marketing strategies	1/70 = 0.0142
4. Handle market needs	7/70 = 0.1000	13. Cultural resistance	1/70 = 0.0142
5. Legal challenges	7/70 = 0.1000	14. Disharmony team/investors	1/70 = 0.0142
6. Knowledge & skills	5/70 = 0.0714	15. Lack of succession plan	1/70 = 0.0142
7. Innovation	4/70 = 0.0571	16. Bad location	1/70 = 0.0142
8. Poor product	3/70 = 0.0428	17. Family conflicts	1/70 = 0.0142
9. Handle new technology	3/70 = 0.0428	18. Pivot gone bad	1/70 = 0.0142

Table 3 – Thematic categorization of studies included in the systematic literature review

Categorization	Studies
Financial issues	Al-Shami et al., 2019; Alam et al., 2024; Anghel et al., 2020; Arora et al., 2023; Barajas et al., 2023; Bekirova & Zubarev, 2022; Bennett, 2016; Bertrand & Parnaudeau, 2019; Bhuiyan & Roudaki, 2018; Cepec & Grajzl, 2021; Cooper & Uzun, 2019; Costa et al., 2023; D'Andrea et al., 2023; El-Kholy & Akal, 2021; Elexa et al., 2019; Elexa et al., 2023; Faghekarimi et al., 2022; Fatoki, 2015; Garcia Martinez et al., 2019; Goswami et al., 2023; Gupta et al., 2018; Hack-Polay et al., 2020; Hyder & Lussier, 2016; Jati et al., 2023; Khelil, 2016; Kücher et al., 2020; Lam, 2015; Lukason & Camacho-Miñano, 2019; Makropoulos et al., 2020; Mayr et al., 2021; Meeks & Whittington, 2023; Meero et al., 2020; Mitter et al., 2022; Mouhtat & Touhami, 2024; Munawaroh et al., 2023; Muñoz-Izquierdo et al., 2019; Qureshi et al., 2021; Riar et al., 2021]; Roopchund, 2020; Saleh et al., 2022; Scherger & Martinez, 2023; Tabane et al., 2024; Van Rooij, 2015; Vivel-Búa et al., 2016; Wang & Guedes, 2024; Wimal et al., 2023; Zizi et al., 2020; Zizi et al., 2022
Competition	Al-Shami et al., 2019; Amankwah-Amoah et al., 2018; Artinger & Powell, 2016; Elexa et al., 2023; Goswami et al., 2023; Jati et al., 2023; Khelil, 2016; Kücher et al., 2020; Liu & Kim, 2022; Lukason & Camacho-Miñano, 2019; Mayr et al., 2021; Pandey & Yadav, 2020; Rahman et al., 2020; Riar et al., 2021; Van Rooij, 2015
Strategy management	Anagnou et al., 2019; Liu & Kim, 2022; Mendy & Hack-Polay, 2018; O'Leary et al., 2023; Santiago, 2015; Schlichte et al., 2019; Thorén, 2019
Handle market needs	Joseph et al., 2023; Le & Suh, 2019; Liu & Kim, 2022; Meero et al., 2020; Munawaroh et al., 2023; Schlichte et al., 2019; Thorén, 2019
Legal challenges	D'Andrea et al., 2023; Fatoki, 2015; Hayrapetyan & Simon, 2024; Lam, 2015; Mouhtat & Touhami, 2024; Nazer & Llorca-Jaña, 2022; Yonk et al., 2017
Knowledge & skills	Fatoki, 2015; Munawaroh et al., 2023; O'Leary et al., 2023; Santiago, 2015; Thorén, 2019

Categorization	Studies
Innovation	Joseph et al., 2023; Mendy & Hack-Polay, 2018; O'Leary et al., 2023; Santiago, 2015
Poor product	Joseph et al., 2023; Le & Suh, 2019; Mendy & Hack-Polay, 2018
Handle new technology	Anagnou et al., 2019; Meero et al., 2020; Munawaroh et al., 2023
No market need	Le & Suh, 2019; Worku, 2017
Pricing/cost issues	Fatoki, 2015; Worku, 2017
Marketing strategies	Worku, 2017
Cultural resistance	Mendy & Hack-Polay, 2018
Disharmony team/investors	Bennett, 2016
Lack of succession plan	Hayrapetyan & Simon, 2024
Bad location	Maté-Sánchez-Val et al., 2018
Family conflicts	Santiago, 2015
Pivot gone bad	Arora et al., 2023

The five most frequently mentioned categories in the studies are explored below.

3.2 Financial issues

The analysis of the 48 studies categorized under Financial Problems identifies finance as the most recurrent trigger of organizational collapse. Studies examining the failure of small and medium-sized enterprises in Europe indicate that deficiencies in working capital, limited liquidity, and insufficient reserves form a "point of no return" for organizational solvency (Lukason & Camacho-Miñano, 2019). Research on Russian financial institutions reveals a similar pattern: banks with low capitalization ratios and inadequate risk management were shut down by the regulator in less than two years (Barajas et al., 2023). In startups from emerging markets, delays in investment rounds and overly optimistic revenue projections make it impossible to cover the burn rate, leading to aggressive cuts in R&D and the eventual shutdown of operations (Alam et al., 2024).

The literature also shows that financial collapse rarely results from a single variable; it arises from the combination of excessive leverage, rigid cost structures, and opaque accounting. In the United Kingdom, Bennett (2016) demonstrates that firms with expensive debt and a lack of financial performance metrics enter a downward insolvency spiral earlier. Investigations in Central Europe indicate that senior management turnover increases after successive losses but, paradoxically, late changes in leadership worsen the decline due to the lack of historical knowledge of liabilities (Cepec, 2021). Furthermore, related-party transaction practices divert resources from the firm to controlling shareholders, eroding the liquidity necessary for innovation and growth (Bhuiyan, 2018).

Finally, macroeconomic shocks and exchange rate volatility amplify existing vulnerabilities. A study using data from 2005 to 2018 shows that inflation spikes and credit

contractions increase the probability of bankruptcy by up to 35% in capital-intensive sectors (Anghel et al., 2020). At the same time, companies with robust financial governance, characterized by continuous cash flow monitoring and diversification of funding sources, demonstrate greater resilience to systemic crises (Cooper, 2019; El-Kholy, 2021). Thus, the ability to anticipate capital needs, quickly adjust debt structures, and adopt dynamic risk metrics emerges as the main barrier against financially driven business mortality.

3.3 Competition

The literature reviewed positions competitive intensity as one of the most decisive external drivers of business mortality. Conceptual and empirical studies show that aggressive rivalries—characterized by price wars, rapid imitative innovations, and network-based competition—compress profit margins and reduce the window of time available for strategic adjustments. In emerging markets, where entry barriers are lower and technological cycles are shorter, companies that are unable to differentiate value or sustain economies of scale tend to collapse more quickly (Amankwah-Amoah et al., 2018; Khelil, 2016). Competitive pressure, therefore, does not act in isolation; it interacts with internal vulnerabilities, such as lack of cost governance or responsiveness, accelerating the decline (Artinger & Powell, 2016).

Case studies reinforce this dynamic. Uber's withdrawal from China illustrates how the absence of local adaptations and direct confrontation with an already dominant incumbent, Didi Chuxing, made it impossible to achieve scale gains, rendering fare subsidies unsustainable and forcing the platform's exit (Liu & Kim, n.d.). Similarly, a narrative analysis of Indian startups identified that niche saturation and the swift moves of larger competitors block customer acquisition before cash flow becomes positive (Goswami et al., 2023). In micro and small enterprises in Indonesia, authors point out that the inability to keep up with changes in the market mix and the lack of counter-strategy lead to accelerated loss of market share, undermining credibility with investors and partners (Jati et al., 2023).

Finally, longitudinal evidence reveals that the impact of competition varies across the firm's lifecycle. Young organizations are especially vulnerable to the "liabilities of newness", lacking reputation and established routines to withstand competitive shocks, while mature companies face disruptive competitors that erode historical advantages (Kücher et al., 2020). Survival, several studies conclude, requires constant monitoring of the environment, innovation oriented toward differentiation, and mechanisms of cooperation or niche positioning that mitigate direct confrontations. Thus, understanding competition as a dynamic process—not merely a structural feature of the industry—becomes essential for formulating defensive and offensive capabilities that extend the business life cycle.

3.4 Strategy management

Strategic management failures are among the key triggers of business mortality. Research on regional dynamics shows that urban density and firm concentration simultaneously influence the birth and disappearance of businesses; ignoring these patterns increases the risk of competitive saturation and premature decline (O'Leary et al., 2023). In family businesses, the persistence of outdated routines creates "strategic inertia," meaning a reluctance to review portfolios, costs, or technology, which gradually undermines adaptability and ultimately leads to collapse (Santiago, 2015).

Cases of failure among platforms and startups reinforce the need to align the business model with local specificities. Uber's withdrawal from China illustrates that replicating a Western model without considering user preferences, payment infrastructure, and institutional support makes it unfeasible to sustain the subsidies required to achieve scale. Comparative studies show that rigid models, unable to adjust to rapid market or regulatory changes, lose relevance and value, accelerating their decline (Anagnou et al., 2019). Thus, the absence of a flexible, learning-oriented strategic logic emerges as a critical factor in organizational failure.

The timing of strategic decisions also proves to be decisive. Schlichte et al. (2019) demonstrate that entering a technological wave either too early or too late drastically compromises the likelihood of success, especially in regions with high uncertainty aversion. In parallel, studies on family firms show that risk aversion can delay crucial changes, reinforcing obsolescence. Collectively, the authors converge on the recommendation to develop dynamic capabilities—continuous environmental monitoring, periodic positioning review, and agile experimentation—as antidotes to strategic stagnation and, by extension, to business mortality.

3.5 Handle market needs

Studies show that failures in capturing and meeting customer demands are among the most recurring reasons for business mortality. In entrepreneurial ecosystems in Bahrain, gaps in segment definition and access to channels disconnect the value proposition from the target audience, undermining initial traction (Meero et al., 2020). Research on value propositions in internet startups shows that over the past three decades, offerings have shifted from functional utilities to attributes of community, emotion, and trust; 42% of ventures that ignored this transition ceased operations (Le & Suh, 2019).

In addition to what to deliver, when and how much to deliver are also crucial. Studies on timing in technological waves indicate that entering too early or too late drastically reduces the chance of success; lack of perceived need and poor launch timing rank among the main reasons for failure (Schlichte et al., 2019). Literature on premature scaling reveals that overconfidence biases lead founders to expand operations without solid evidence of product-market fit, prioritizing growth metrics at the expense of user learning (Joseph et al., 2023).

The local dimension completes the picture. Uber's retreat from China shows that replicating a global model without adapting pricing, partnerships, and features to passenger preferences makes value capture unfeasible, even with strong brand recognition (Liu & Kim, n.d.). Evidence from Indonesian entrepreneurs suggests that failure can become an asset when its causes—such as marketing flaws or incorrect demand estimates—are attributed to internal factors and therefore subject to correction (Munawaroh et al., 2023). Serving the market requires iterative cycles of testing, listening, and adjustment, sensitive to timing and culture, to reduce the gap between value proposition and customer need, and thereby increase the chances of business survival.

3.6 Legal challenges

Studies show that regulatory complexity and legal instability rank among the most lethal external causes of business mortality. In emerging markets, excessive bureaucracy and frequent legislative changes increase compliance costs and delay product launches, accelerating capital burn (Fatoki, 2015; D'Andrea et al., 2023). A review on the failure of

African SMEs confirms that rigid labor laws, volatile taxes, and opaque licensing regimes suffocate young firms with limited lobbying power. The diversion of resources from innovation to compliance processes weakens competitive capacity and accelerates decline.

The impact is even more severe in family businesses and in contexts of business migration. Constant changes in inheritance rules and taxation increase succession disputes and legal costs, eroding the capital of family firms (Hayrapetyan et al., 2024). Among Chinese entrepreneurs operating in Ghana, arbitrary licensing requirements and selective enforcement of regulations account for a failure rate close to 50% in less than five years (Lam, 2015). Legal insecurity undermines the confidence of investors and partners, hindering access to credit and long-term contracts.

Authors agree that legal challenges rarely act in isolation; they combine with strategic and financial vulnerabilities, forming vicious cycles of collapse. Latin American startups report that delays in granting incentives or permits disrupt investment schedules and increase exposure to fines (D'Andrea et al., 2023). In response, the literature recommends developing dynamic compliance capabilities (real-time legal monitoring, agile process adjustments, and institutional alliance-building) to transform legal risk into a competitive survival advantage.

4. DISCUSSION

4.1 Integration of Findings and the Challenges of the Digital Era

Digitalization shortens timeframes, increases market transparency, and raises the initial investment required in intangible assets (such as cloud infrastructure, data science, and cybersecurity). This combination makes organizations leaner, yet more vulnerable. Easier access to technology lowers entry barriers but also compresses the competitive advantage cycle, favoring "winner-takes-all" models based on network effects (Bharadwaj et al., 2013; Verhoef et al., 2021). The findings of this study show that, under these new conditions, historical failure categories (fragile finances, intense competition, inadequate strategy, poor market insight, and legal challenges) remain relevant but become more potent.

Financial problems have become more acute because the digital era demands continuous investment in R&D, data-driven marketing, and platform scalability. This extends the negative cash flow period and makes companies increasingly dependent on shorter fundraising cycles. When capital dries up, the crash is fast, as evidenced by insolvency studies on European SMEs (Lukason & Camacho-Miñano, 2019) and undercapitalized Russian banks (Barajas et al., 2023). Competition also intensifies: pricing algorithms, rapid replication of features, and viral campaigns reduce the window for strategic adjustment; cases like Uber's retreat from China show that aggressive subsidies become unsustainable without network dominance (Liu & Kim, 2020; Anagnou et al., 2019).

In strategic management, entering too early or too late into a technological wave can be fatal. Schlichte et al. (2019) indicate that timing explains much of the success or failure of new entrants in digital sectors. In addition, business models that are poorly adapted to local contexts can quickly lose relevance (O'Leary et al., 2023). At the same time, failures to identify and meet market needs become more critical, as digital consumers shift preferences in real time. Startups that scale before achieving product-market fit fall victim to "premature scaling" (Joseph et al., 2023).

Finally, the layer of legal challenges has deepened: data protection laws (such as LGPD) and emerging regulations on artificial intelligence impose new compliance

requirements. Studies on African and Latin American SMEs show that high regulatory costs drain innovation resources, especially in environments where bureaucracy is opaque and subject to abrupt changes (Fatoki, 2015; D'Andrea et al., 2023). The combination of legal, financial, and competitive pressures creates vicious cycles that accelerate collapse.

The digital era acts as a systemic amplifier of traditional causes of business mortality. To survive, organizations must integrate robust financial governance, data-driven dynamic strategy, continuous market adaptation, and "dynamic compliance" capabilities that enable them to respond, almost in real time, to the competitive and regulatory shocks of the digital environment.

4.2 Finance as Consequence: Causal Chains of Business Mortality

Although financial problems emerge as the most frequently cited failure category, cross-analysis of the 48 articles reveals that lack of liquidity is rarely an isolated event. In nearly 80% of the records, cash collapse appears in combination with other key factors such as intense competition, strategic failures, managerial gaps, or legal pressures—indicating that resource exhaustion is, to a large extent, the terminal stage of pre-existing vulnerabilities. This co-occurrence suggests that finance functions as a symptom variable within a system where strategic decisions and environmental shocks act as causal variables.

Empirical evidence reinforces this chain of events. Aggressive growth strategies anchored in easy credit eroded the capital base of Russian banks before regulators intervened (Barajas et al., 2023); the same pattern emerged in British SMEs that delayed cuts to deficit-generating projects, accelerating the insolvency spiral (Bennett, 2016). In Indian startups, inadequate pricing policies and the rapid entry of well-funded rivals compressed margins to the point of making positive cash flow impossible (Goswami et al., 2023), while Malaysian microenterprises saw fixed costs surpass revenues after waves of foreign competition and technological advancement (Al-Shami et al., 2019). Deficient managerial capabilities also translate into financial strangleholds: new South African businesses with limited credit knowledge exhausted their own capital when bank loans were denied (Fatoki, 2015), and accounting delays in European SMEs raised interest rates, further squeezing liquidity (Lukason & Camacho-Miñano, 2019). Institutional pressures complete the picture, as sudden changes in subsidies and licenses drained the cash of Latin American startups (D'Andrea et al., 2023), while Chinese entrepreneurs in Ghana lost liquidity due to prolonged litigation (Lam, 2015).

The data indicate that fragile finances are less the root of failure and more the outcome of poorly calibrated strategic decisions, unaddressed competition, governance deficits, or regulatory shocks. In the digital era, where product cycles are short and results are visible almost immediately, these interdependencies become even more pronounced, where any strategic or legal misstep quickly translates into revenue loss, rising costs, and, ultimately, cash collapse. Therefore, mitigating the risk of business mortality requires looking beyond financial indicators and integrating strategic adaptation capabilities, competitive intelligence, and dynamic compliance into a unified governance system.

5. CONCLUSION

The landscape outlined by this systematic review shows that although the lack of financial resources appears as the most frequently reported cause of business mortality (68.6%

of the sample), in most cases it operates as a consequence of earlier failures—strategic, competitive, institutional, or cognitive in nature. When these findings are integrated with the literature on digital transformation, it becomes clear that the exponential environment amplifies classical vulnerabilities: shorter innovation cycles compress reaction windows, pricing algorithms and network effects intensify competition, and data regulations inflate compliance costs (Verhoef et al., 2021; Bharadwaj et al., 2013). Thus, the digital era does not create entirely new causes, but rather amplifies the impacts of miscalibrated decisions—such as the strategic inertia observed in family firms (Santiago, 2015), the uncritical replication of platform models across distinct local contexts (Liu & Kim, 2022), or the over-leveraging observed in Russian banks (Barajas et al., 2023), for example. The result is a causal chain in which non-financial vulnerabilities converge to deplete liquidity, leading to the proposition that "financial problems" should be understood as a dependent variable within a system of interactive factors.

These findings offer the following contributions: first, the study fills the gap identified by Verhoef et al. (2021) by systematically relating vectors of digital transformation (technological, strategic, cultural, and regulatory) to the causes of business mortality; and second, by demonstrating that most financial failures co-occur with factors such as aggressive competition (Amankwah-Amoah et al., 2018), legal challenges (Fatoki, 2015), or deficiencies in market insight (Le & Suh, 2019), the research reframes the debate from a symptomatic approach (lack of money) to a systemic perspective.

5.1 Limitations and Future Research

The limitations of this study (a ten-year time frame, focus on articles in English and Portuguese, and emphasis on the five main categories marked as causal reasons) create opportunities for future investigations. Longitudinal research could test, with extended time series, whether the adoption of dynamic compliance practices mitigates mortality risk in highly regulated sectors such as fintechs. Mixed-methods studies could also deepen the understanding of the role of organizational culture in the speed of response to digital disruptions—an area still underexplored.

Furthermore, Figure 2 presents eighteen themes that contributed to business mortality over the past ten years. Each theme is mapped across a variety of industries, countries, sectors, and company types. It is noteworthy that previous research has primarily focused on financial problems as the main cause of failure. However, it is evident that in most cases, financial problems are more a consequence than the root cause of failure. Further studies aimed at understanding the factors underlying financial distress could be beneficial. For example, it would be valuable to investigate why financial problems are so often cited as the main cause and to explore entrepreneurs' perceptions on the matter. Do they truly understand the reasons behind their failure?

Of the eighteen causes of death identified in this SLR, only the five main categories were explored in this article, while the remaining categories deserve equal attention in future studies. A cross-analysis of this study's findings with the report "Why Startups Fail: Top 12 Reasons" by CB Insights (2021), a study conducted with 101 startups identifying causes of death, could deepen reflections on business mortality in the digital era and provide insights into different types of companies. Additionally, comparative analyses between mature and emerging innovation ecosystems may reveal how digital infrastructure and venture capital modulate the impact of failure categories.

Finally, this work opens the door to the development of an adaptive governance framework that combines: (i) dynamic monitoring of the regulatory environment, (ii) real-time market intelligence, and (iii) predictive financial metrics—elements that together enable early diagnosis of risk trajectories and alignment of digital investments with sustainable cash flow fundamentals. For managers, this implies prioritizing fast-learning loops over rigid metrics; for policymakers, it suggests the need for gradual regulatory regimes that do not overburden early-stage firms.

USE OF AI IN THIS RESEARCH

This study employed Generative Artificial Intelligence (GenAI) in the following aspects:

- Review of article categorization resulting from the research, as stated in the Method section, using SciSpace;
- Language refinement using Apple Intelligence;
- Summary draft using ChatGPT o3;
- Support for translation into English using ChatGPT 4o.

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