

ROMANIAN CORPORATE DISCOURSE WITHIN THE CONTEXT OF DIGITAL TRANSFORMATION: A MULTI-METHODOLOGICAL LONGITUDINAL ANALYSIS

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Abstract: This research investigates how the health crisis influenced digital technology adoption in the official discourse of Bucharest Stock Exchange companies by analysing annual financial reports from 2017 to 2024, divided into pre-pandemic (2017-2019) and post-pandemic (2020-2024) periods. The study employs a comprehensive methodology on 120 annual reports from BET index companies, using: (1) TF-IDF score calculations to quantify technology term relevance; (2) event studies assessing pandemic impact; (3) Latent Dirichlet Allocation (LDA) topic modelling; (4) longitudinal topic distribution analysis; and (5) regression modelling with dummy variables. Results confirm all five hypotheses. TF-IDF scores reveal significant technological terminology increases during 2020-2021, followed by gradual stabilization. Event study analysis demonstrates substantial pandemic-driven transformations, with teleworking and digitization terms increasing 116.09% and new telework concepts emerging. LDA modelling identified major thematic reconfiguration, shifting from blockchain and automation focus to digital infrastructure and cybersecurity dominance. Regression models confirm the pandemic's catalytic effect through statistically significant post-COVID dummy variable coefficients. The findings highlight the pandemic's impact on corporate digital discourse transformation among Romanian public companies.

Keywords: Digitalization; digital transformation; COVID-19; content analysis; TF-IDF; LDA.

JEL Codes: G14, O33, C38, M15.

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1. Introduction

In the current context, characterized by accelerated developments in information and communication technologies, digitalization is a transformational phenomenon with implications for all economic and social sectors.

The emergence and development of the digital economy have fundamentally reconfigured traditional business models, generating new opportunities for growth and innovation, but also associated obstacles and challenges for organizations that fail to synchronize with the new socio-economic conditions. Capital markets, in this economic landscape, are considered a barometer of economic performance, providing an optimal framework for observing and assessing the level of adoption and implementation of digital technologies in current corporate strategies.

The main objective of this scientific investigation is to quantify the level of integration of emerging technologies in the official discourse of corporate entities listed on the Bucharest Stock Exchange, aiming to determine the degree of awareness and adoption of digital transformation in the local business environment, transposed in the official communication of companies traded on the Romanian stock exchange. Specifically, this research aims to investigate how the healthcare crisis has influenced the adoption and implementation of digital technologies by examining annual financial reports from 2017 to 2024, segmented into pre-pandemic (2017-2019) and post-pandemic (2020-2024) intervals.

The timeliness of this research is heightened by the unprecedented global transformation triggered by the COVID-19 pandemic, which has shifted organizations' communication towards digital strategies, acting as a catalyst for accelerating digital transformation, both nationally and globally. The researched topic is important due to its potential to provide empirical evidence on how crisis events influence the digital discourse of entities listed on the Romanian stock market. This research makes new contributions to the current academic literature primarily through its multi-methodological approach, providing an analytical basis that can be replicated in other markets and contexts. The study provides empirical evidence from the Romanian capital market, contributing to the understanding of digital transformation patterns in emerging economies, addressing a gap in the literature that focuses predominantly on developed markets.

At the same time, temporal evidence on how shocks from the external environment influence the corporate discourse on digitization is mentioned in the results. By studying the annual reports of listed companies, we provide up-to-date expert contributions and provide insights into how companies communicate their digital strategies to their stakeholders, thus creating an intersection between finance and digital transformation literature.

The continuation of this research is organized as follows: Section 2 provides a

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literature review that examines the current state of the art research on digitization, digital transformation, and the impact of COVID-19 on digital business strategies. Section 3 details the methodological approach and empirical data, including the sample selection criteria, the formulation of research hypotheses, and the multi-methodological analytical framework. Section 4 exposes the empirical results by systematically testing each of the five hypotheses formulated, while the last section of the research synthesizes the main findings in the context of Romanian corporate discourse.

2. Literature review

2.1. Conceptual framework for digital transformation

The body of literature does not provide an agreed-upon definition of digitization; for this reason, the term is often confused with other terms such as digitization and digital transformation, although each of the three terms has a distinct perspective. If digitization has in mind a technical perspective, the term digitalization presupposes the existence of both a technical and a social perspective (Bockshecker, 2018). At the same time, digital transformation goes beyond the perspectives covered by the terms, including elements that are related to the accelerated adaptation of innovative technologies (Bockshecker, 2018).

The conceptual distinction between these terms has been further refined by recent academic work. Vial (2019) provides a framework that defines digital transformation as a process that aims to improve an entity by triggering significant changes to its assets through combinations of information, computing, communication and connectivity technologies. Similarly, Hanelt et al. (2021) argue that digital transformation represents a fundamental change in the way organizations create and deliver value to customers through the strategic use of digital technologies.

The strategic dimensions of digital transformation have been extensively reviewed by Fitzgerald et al. (2014), who identify four key areas: technology utilization, changes in value creation, structural change and financials. Their framework provides a holistic view of digital transformation that encompasses not only technology deployment but also organizational restructuring and business model innovation. This multidimensional approach has been further developed by Matt et al. (2015), who propose a strategic framework for digital transformation that includes technology utilization, changes in value creation, structural changes, and financial aspects.

2.2. Drivers of digital transformation adoption

Bibliometric analysis of the current scholarly literature indicates a focus of academic publications on the determinants of digitization in the pre-pandemic context

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(Dănescu, 2025), an aspect we have further investigated in our empirical study on the relationship between digitization and financial performance within the same volume.

Ohlert et al. (2022) investigated more than 15.000 German companies using 2017 data to study the factors influencing digitalization. Their results highlight that larger-sized entities, employees with higher qualifications, coupled with competitive pressure, are consistently associated with high digitalization adoption. The same positive association has also been found by researchers such as Kinkel et al. (2022), whose results highlight the direct link between R&D investment and the deployment of advanced digital technologies.

The relationship between organizational characteristics and digital transformation has been further explored by Gurbaxani and Dunkle (2019), who examine how organizational structure, culture, and leadership influence the success of digital transformation. Their findings suggest that organizations with flatter hierarchies, more collaborative cultures, and leaders who are supportive of digital initiatives are more likely to achieve successful digital transformation outcomes. This organizational perspective was complemented by the work of Chanias et al. (2019), who investigated the role of digital transformation strategies in facilitating organizational change.

Similarly, researchers such as Blichfeldt and Faullant (2021) have also identified a link between product innovativeness and the adoption of advanced digital technologies across manufacturing sectors in five European countries. The interconnectivity between R&D investment and the adoption of advanced digital technologies has also been confirmed by other research focusing on small and medium-sized entities (SMEs) in Europe (Omrani et al., 2024).

At the same time, a study focusing on Tunisian SMEs found no significant influence of R&D investment on the adoption of advanced manufacturing technology (Kossai et al., 2020). At the same time, in Italian and German SMEs, respectively, researchers Radicic and Petković (2023) identified that there is a trade-off, internally, i.e., high investments in digitalization may lead to a reduction in domestic R&D efforts.

The comprehensive analysis of the determinants of digitization has also been enriched by Chyzhevskaya et al. (2021), who examine digitization as a driver of information systems development and modernization of accounting systems. Their study provides empirical evidence on how digitization transforms business operations along with accounting practices, while demonstrating that digital transformation requires not only technological implementation but also fundamental changes in organizational processes and professional expertise.

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2.3. The impact of the pandemic on digital transformation

The COVID-19 pandemic has emerged as a major external factor shaping digital transformation trajectories across sectors and economies. Soto-Acosta (2020) emphasizes that the mobility restrictions and social distancing measures imposed by the pandemic have caused a fundamental change in the way society functions, requiring rapid transformations of traditional operational models. According to research conducted by DeFilippis et al. (2020), the pandemic acted as an "imposed natural experiment" challenging the ability of organizations to deploy at an accelerated pace, technologies such as cloud computing, videoconferencing and other large-scale virtual collaborative systems.

Accelerated digitization during the pandemic has been documented across industries and geographies. Priyono et al. (2020) examine how Indonesian SMEs adapted their business models during the pandemic, finding that those companies that rapidly adopted digital technologies were more likely to survive and maintain performance levels. Their findings are consistent with research by Katz and Callorda (2018), who argue that digital transformation can act as a resilience mechanism during economic turbulence.

The same context of urgency is also observed in studies by Verhoef et al. (2021), whose results highlight that in the service, education and public administration sectors, the health crisis compressed into a few months digital transformation processes that would normally have required three to five years.

According to empirical studies by McKinsey & Company (2022), organizations that adopted advanced digital solutions in the period after the health crisis ended experienced up to a 25% increase in productivity compared to entities that continued to operate using traditional models.

The influence of pandemics on digital transformation has also been examined from a strategic management perspective. Papadopoulos et al. (2020) examine the role of digital preparedness in crisis management and organizational resilience. Likewise, Kraus et al. (2021) investigate how digital transition strategies evolved during the pandemic, finding that firms that had already initiated digital transformation processes before the pandemic were better positioned to adapt quickly to the new context.

2.4. The dynamics of remote working

At the same time, mobility restrictions imposed in the wake of the health crisis have triggered an accelerated change in the way work is organized, leading to the massive adoption of teleworking models. According to data provided by Eurofound (2020), by April 2020, around 40% of employees in the European Union had adopted full-time teleworking, compared to less than 5% in the pre-pandemic period.

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The transition to remote work has been accompanied by significant technological and organizational challenges. Barrero et al. (2021) examine the implications for the productivity of homeworking, finding that while initial productivity gains have been observed, long-term sustainability requires significant investments in digital infrastructure and management practices. Their research precedes studies by Bloom et al. (2015), which provide longitudinal evidence on the effects of remote work on employee performance and organizational-level outcomes.

The technology infrastructure requirements for conducting remote work effectively have been extensively documented by Wang et al. (2021), who examine the role of cloud computing, collaboration tools, and cybersecurity measures in facilitating remote work.

2.5. Digital transformation and corporate communication

The relationship between digital transformation and corporate communication has received increased attention in recent literature. Mikalef et al. (2019) examine how digital transformation initiatives are communicated to stakeholders, finding that firms that effectively communicate their digital strategies achieve better stakeholder support and better implementation outcomes.

The role of corporate disclosures in digital transformation has been examined by Li et al. (2018), who examine how companies use annual reports and other disclosure documents to communicate their digital transformation strategies to investors and other stakeholders.

Recent research by Nambisan et al. (2019) examines how digital transformation affects corporate innovation communication, finding that firms are increasingly using digital channels and platforms to communicate their innovation activities.

The integration of social media into enterprises' digital transformation strategies has been extensively studied by Onețiu (2020), who examines the impact of social media adoption by enterprises on digital transformation processes. His research demonstrates that social media platforms serve as essential tools for digital transformation, enabling companies to improve customer relationship management, enhance sales performance and facilitate organizational change.

2.6. Sustainability and digital transformation

The pandemic crisis has also raised awareness of the interconnectedness between socio-economic and natural systems, leading to a re-evaluation of development paradigms from a sustainability perspective. According to a study by the United Nations Environment Programme (2020), mobility restrictions and reduced economic activities during the pandemic period have led to significant temporary

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decreases in greenhouse gas emissions and air pollution levels, highlighting the potential for transforming production and consumption patterns.

The intersection between digital change and sustainability has been explored by several researchers. Bharadwaj et al. (2013) examine how digital technologies can enable sustainable business approaches, finding that businesses that integrate sustainability considerations into their digital transformation strategies achieve better long-term outcomes. Orecchini et al. (2018) examine how digital technologies can be leveraged to reduce environmental impacts while maintaining economic growth, providing a framework for understanding the sustainability implications of digital transformation initiatives. Their research is supported by the recent work of Ghobakhloo (2020), which examines the role of Industry 4.0 technologies in facilitating sustainable manufacturing practices.

2.7. Comprehensive analysis of similar studies

The table below provides a comprehensive overview of similar studies in the field, highlighting the findings, gaps identified in the research and their results:

Table 1. Analysis of similar studies

Authors	Year	Sample Context	Key Findings	Research Gap Identified	Research Outcomes
Ohlert et al.	2022	15,000 German companies	Larger entities, higher qualifications, and competitive pressure drive digitalization	Limited to developed markets	Framework for digitalization predictors
Kinkel et al.	2022	Manufacturing companies worldwide	Direct link between R&D investment and digital technology deployment	Focus on manufacturing only	Investment-technology adoption model
Blichfeldt & Faullant	2021	5 European countries manufacturing	Product innovativeness linked to digital technology adoption	Limited sectoral scope	Innovation-digitalization framework
Omrani et al.	2024	European SMEs	R&D investment is crucial for SME digitalization	Geographic limitations	SME-specific digitalization model
Soto-Acosta	2020	Conceptual review	The pandemic forced a rapid	Lack of empirical evidence	Theoretical framework for

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			operational model transformation		crisis-driven digitalization
DeFilippis et al.	2020	US organizations	Organizations rapidly deployed cloud, videoconferencing, and collaboration systems.	Limited temporal scope	Crisis adaptation model
Verhoef et al.	2021	Service, education, and public sectors	3-5 year processes compressed into months	Sectoral limitations	Accelerated transformation model
Vial	2019	Literature review	Digital transformation as a value creation process	Theoretical focus only	Conceptual framework
Hanelt et al.	2021	Multiple case studies	Digital transformation requires organizational change	Limited quantitative evidence	Change management framework
Matt et al.	2015	Case studies	Four-domain digital transformation model	Limited empirical validation	Strategic planning framework
Kraus et al.	2021	European companies	Pre-pandemic digital initiatives enable crisis adaptation	Geographic limitations	Digital readiness model
Barrero et al.	2021	US workers	Initial productivity gains require sustained investment	Country-specific focus	Work-from-home productivity model
Li et al.	2018	Listed companies	Transparent digital communication improves market response	Limited to disclosure documents	Communication effectiveness model
Mikalef et al.	2019	Multiple sectors	Effective digital communication improves stakeholder support	Sectoral limitations	Stakeholder communication framework
Ghobakhloo	2020	Manufacturing	Industry 4.0 enables sustainable practices	Theoretical focus	Sustainability-digitalization model
Correani et al.	2020	Italian companies	A multi-dimensional measurement	Country-specific	Measurement methodology

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			framework is needed		
Priyono et al.	2020	Indonesian SMEs	Digital adoption is crucial for pandemic survival	Single country focus	Emerging market adaptation model

Source: Authors' projection

There is a clear predominance of studies focusing on developed markets with limited attention to emerging economies. Also, most research examines digital transformation from operational or strategic perspectives, with limited attention paid to corporate discourse and communication patterns. Finally, although studies that focus on the impact of COVID-19 are numerous, few provide a longitudinal analysis of the evolution of discourse over time.

This research addresses these gaps by providing a comprehensive analysis of the digital transformation discourse in an emerging market context (Romania), using multiple methodological approaches (TF-IDF, LDA, event study, regression analysis) and examining longitudinal patterns over an extended period (2017-2024).

3. Methodology and empirical data

3.1. Sample selection

In this research, the sample on which the quantitative methods are applied consists of the companies included in the benchmark index of the Bucharest Stock Exchange (BVB), namely the BET (Bucharest Exchange Trading Index), representing the main index of the Romanian stock market and gathering the most liquid companies. From the total of 20 companies in the BET index, those that were not listed or did not report for the entire period analysed, i.e., 2017-2024, were eliminated. Therefore, a total of 15 entities listed on the Bucharest Stock Exchange were studied.

To include in the results the impact of the health crisis, i.e., the COVID-19 pandemic, on the corporate discourse of the sampled entities, the period under investigation was segmented into two distinct intervals, i.e., the pre-pandemic period, which includes the 2017-2019 interval, and the post-pandemic period, which includes the 2020-2024 interval.

Thus, through this research, we focus on examining a total of 120 annual financial reports, 45 of which correspond to the period before the health crisis and 75 of which correspond to the period after.

3.2 Research hypotheses

To achieve the set objectives, we aim to test the following research hypotheses:

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Hypothesis 1: The TF-IDF scores show a significant increase in the use of technology terms in the 2020-2021 period, followed by a stabilization in the post-pandemic period.

Hypothesis 2: The COVID-19 pandemic significantly influenced the frequency of use of technology terminology in official communications of listed companies.

Hypothesis 3: Latent Dirichlet Allocation (LDA) analysis identifies changes in the distribution of predominant topics in corporate discourse in the 2020-2021 period, with a focus on topics associated with digitalization.

Hypothesis 4: Topic analysis highlights a diversification of the main topics addressed by companies, with an emphasis on topics related to digitization in the pandemic period.

Hypothesis 5: Regression models with dummy variables confirm the statistically significant effect of the COVID-19 crisis on the frequency of use of technological terminology in corporate communications.

The implemented research methodology encompasses five complementary analytical directions: (1) TF-IDF scoring to quantify the relevance of technology terms in the corpus of annual financial reports; (2) application of event study to assess the pandemic impact; (3) topical modelling using the LDA method for topic mapping; (4) longitudinal analysis of the distribution of topics; and (5) econometric regression modelling with dummy variables to isolate specific contextual effects.

3.3. TF-IDF Score Calculation

The TF-IDF (Term Frequency - Inverse Document Frequency) score is used to evaluate the importance of a word in a set of documents and is a common method used in textual analysis, helping to identify the most relevant words in a corpus of texts. The TF-IDF score is calculated by applying the following formula:

$$\text{TF-IDF}(t, d) = \text{TF}(t, d) \times \text{IDF}(t) \quad (1)$$

Where,

TF (Term Frequency) is the frequency of a word in a document and is calculated as the ratio of the number of occurrences of the word in the document to the total number of words in the document, according to the formula below:

$$\text{TF}(t, d) = \frac{\text{Number of times term } t \text{ appears in document } d}{\text{Total number of terms in document } d} \quad (2)$$

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IDF (Inverse Document Frequency) measures the importance of a word in a set of documents and is calculated using the formula below:

$$\text{IDF}(t, D) = \log \left(\frac{\text{Total number of documents}}{\text{Number of documents containing term } t} \right) \quad (3)$$

The TF-IDF score calculation is performed for each word in the vocabulary set in the keyword list, using Python's TfidfVectorizer library.

The list of keywords associated with digitization and used to calculate this score is as follows: "cloud computing", "digital transformation", "cybersecurity", "remote work", "teleworking", "online services", "e-commerce", "digital infrastructure", "data center", "digital resilience", "digital platforms", "IT automation", "AI", "artificial intelligence", "machine learning", "blockchain", "digital onboarding", "video conferencing", "Microsoft Teams", "Zoom", "Google Meet", "e-learning", "digital skills", "digital upskilling", "agile digital", "remote access", "platform modernization", "digital strategy", "IT modernization", "online collaboration", "e-payment", "digital integration", "network infrastructure", "cloud migration", "cyber risk", "business continuity", "digital innovation", "digitization", "technology investment", "software-as-a-service", "infrastructure-as-a-service", "digital operations", "smart services".

3.4. Application of the Event Study Methodology

Complementary to the above-mentioned score calculation, another qualitative method used is the event study method, which is used to assess the impact of an external event on the use of relevant terms associated with digitization in the annual financial reports and in the corporate discourse of the issuers in the sample. In this research, the external event, defined and investigated, is the COVID-19 pandemic, which occurred in 2020. Thus, the following study periods were defined, which include the external event of the health crisis:

1. The pre-COVID period (2017-2019), as a benchmark of normal behavior, i.e., the discourse identified in annual financial reports, before the onset of the pandemic.
2. The post-COVID period (2020-2024), which includes the direct impact of the pandemic on financial reporting, is used to analyze changes in the use of relevant terms, reflecting the accelerated adaptation of companies to new socio-economic conditions.

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3.5. Application of the LDA method

Linear Discriminant Analysis (LDA) was used to examine how changes in the use of digitization-specific terms in the annual financial statements were influenced by the external context of the COVID-19 pandemic.

3.6 Regression with Dummy Variables

Regression with dummy variables is used to analyse the impact of the COVID-19 pandemic on the use of digitization-specific terms in issuers' financial reports. In this model, dummy variables are introduced to reflect the period when the pandemic started to influence global economic activity, i.e., 2020 and later periods. The dummy variable is introduced in the model to signal the presence of the health crisis. Thus, the variable takes the value of 0 for the years before 2020 and 1 for 2020 and later periods; thus, it measures the potential changes in the use of technology terms due to the existence of the pandemic context.

4. Empirical results

Hypothesis 1: The TF-IDF scores show a significant increase in the use of technology terms in the 2020-2021 period, followed by a stabilization in the post-pandemic period.

By evaluating the total scores obtained by applying the TF-IDF method, over the entire initially established interval (2017-2024), a dynamic of the intensity of the keywords associated with digitization is observed, being associated with the impact of the health crisis, also illustrated in the figure below.

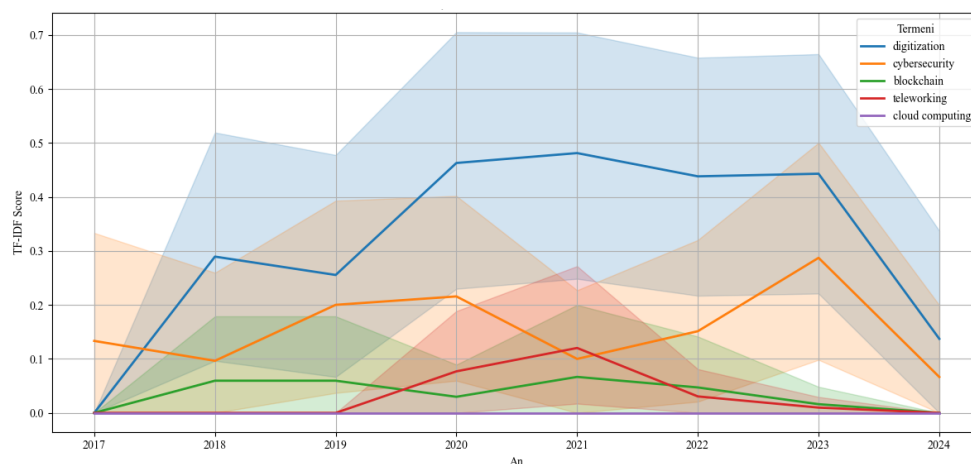


Fig. 1 Evolution of TF-IDF scores
Source: authors' projection using Python

The results for 2017 show the lowest score for keyword intensity associated with digitization, only 2.00, indicating a low or incipient interest in digitization-related areas. Subsequently, between 2018-2019, the resulting scores steadily increased, reaching a value of 7.73 in 2019, suggesting a gradual intensification of corporate discourse closely related to the adoption of digital technologies.

The 2020-2021 period, marked in particular by the global crisis caused by the COVID-19 pandemic, shows a significant jump in the total TF-IDF score, which reaches 11.78 in 2020 and remains almost constant in 2021 at 11.52.

From 2022 onwards, TF-IDF scores start to gradually decrease, reaching a threshold of 10.00, and continue to fluctuate between 2023 and 2024, with a peak of 11.34 in 2023 and a sharp decrease in 2024 to 3.06, reflecting the stabilization of the digitization phenomenon.

The results obtained by calculating the TF-IDF score fully confirm the first hypothesis formulated, highlighting a complex dynamic in terms of the adoption of digital terminology in the corporate discourse of companies listed on the Bucharest Stock Exchange during the period under investigation. The longitudinal analysis of the TF-IDF scores reveals the existence of an evolutionary pattern, characterized by an initial phase of gradual growth in the pre-pandemic period (2017-2019), followed by an acceleration in the critical period 2020-2021, and completed by a phase of consolidation and relative stabilization in the post-pandemic period (2022-2024).

Hypothesis 2: The COVID-19 pandemic significantly influenced the frequency of use of technology terminology in official communications of listed companies.

Following the application of the event study method, the concept of teleworking shows a significant increase in frequency in the post-COVID-19 period, from an almost non-existent presence in the period before the health crisis. Thus, the negative value of the t-statistic, shown in the table below, confirms the direction of change, i.e., the post-event increase.

Table 2. Results of applying the event study method

Term	Average_Pre_COVID	Average_Post_COVID
teleworking	0	0.047507578
digitization	0.18163758	0.39249407
cybersecurity	0.143313942	0.164152865
blockchain	0.03975232	0.031947564

Term	Absolute Modification	Percentage Change	T_Statistic	P_Value
teleworking	0.047507578	inf	-2.55653739	0.01262212

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digitization	0.21085649	116.0863796	- 2.743437871	0.00713411 9
cybersecurity	0.020838923	14.54075097	- 0.334004734	0.73912422 4
blockchain	-0.007804756	-19.63346072	0.238019592	0.81248881

Source: authors' projection using Python

The term 'teleworking' demonstrates the most dramatic transformation, going from virtually non-existent use (0) in the pre-pandemic period to a measurable presence (0.047507578) after COVID-19. This represents an infinite percentage increase with statistical significance ($p = 0.012$), confirming the sudden adoption of teleworking terminology in corporate discourse as an immediate organizational response to pandemic constraints.

The term 'digitalization' shows the most substantial increase of all the concepts analysed, with a doubling in relevance (+116.09%) after the outbreak of the pandemic. The significant p-test value ($p < 0.01$) confirms that this transformation is not the result of a random fluctuation but represents a consistent trend of change in the use and relevance of the term in corporate discourse.

Although there is a modest increase in the TF-IDF score for the term "cybersecurity" (+14.54%), this change does not reach the threshold of statistical significance ($p = 0.739$). The result indicates that, despite the context of increasing use of digital technologies, the concern for cybersecurity has not undergone a substantial transformation in public discourse compared to the pre-pandemic period.

The term Blockchain is the only concept among those analysed that shows a downward trend following the COVID-19 event, with a 19.63% reduction in the TF-IDF score. However, this change is not statistically significant ($p = 0.812$).

The results obtained following the application of the event study analysis generally support the validity of the second hypothesis. The health crisis caused by COVID-19 generated a sudden increase in the use of terminology associated with digitalization, reflecting immediate organizational reactions to changes in the economic and social context.

The table below summarizes both the observed results and the confirmation of the hypothesis for each of the five most-used keywords in the organizational discourse of the sample companies.

Table 3. Conclusion Assumption 2

Concept	Observed results	Hypothesis
Digitalization	+116,09%, $p < 0,01$, massive and consistent growth	Confirmed
Teleworking	Steep rise from near zero, clear emergence	Confirmed

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Cybersecurity	+14,54%, $p = 0,739$, modest, statistically insignificant growth	Partially confirmed
Blockchain	-19,63%, $p = 0,812$, insignificant decrease	Rejected

Source: authors' projection

Hypothesis 3: Latent Dirichlet Allocation (LDA) analysis identifies changes in the distribution of predominant topics in corporate discourse in the 2020-2021 period, with a focus on topics associated with digitalization.

The table below shows the terms with the highest coefficients in the LDA model, indicating their influence in separating the pre- and post-COVID-19 periods:

Table 4. Results LDA terms

Term	Coefficient
digital transformation	-1.257614e+00
blockchain	-1.249315e+00
networking	8.518478e-01
digitization	-5.059208e-01
teleworking	-3.144034e-01
cybersecurity	1.659021e-01
cloud computing	4.754093e-02
data center	0.000000e+00
digital resilience	0.000000e+00

Source: authors' projection using Python

Studying the results obtained following the application of this calculation method, the terms "Digital transformation" and "Blockchain" show significant negative coefficients, while indicating a strong association with the period prior to the health crisis.

In contrast, the term "Teleworking" shows a significant positive coefficient and indicates a significant association with the post-pandemic period of COVID, emphasizing the transition to teleworking during the pandemic. At the same time, terms such as "Cloud computing", "Data center", and "Digital resilience" had insignificant influence in separating the two periods, having very small or zero coefficients.

The descriptive statistics of the discriminant function values for each year are detailed in the table below:

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Table 5. Descriptive statistics of the discriminant function

Year	Count	Mean	Std	Min
2017	15.0	-5.863e+15	0.000	-5.863e+15
2018	15.0	-4.188e+15	0.000	-4.188e+15
2019	15.0	-2.513e+15	0.518	-2.513e+15
2020	15.0	-8.375e+14	0.240	-8.375e+14
2021	15.0	8.375e+14	0.269	8.375e+14
2022	15.0	2.513e+15	0.518	2.513e+15
2023	15.0	4.188e+15	0.000	4.188e+15
2024	15.0	5.863e+15	0.000	5.863e+15

25%	50%	75%	Max
-5.863e+15	-5.863e+15	-5.863e+15	-5.863e+15
-4.188e+15	-4.188e+15	-4.188e+15	-4.188e+15
-2.513e+15	-2.513e+15	-2.513e+15	-2.513e+15
-8.375e+14	-8.375e+14	-8.375e+14	-8.375e+14
8.375e+14	8.375e+14	8.375e+14	8.375e+14
2.513e+15	2.513e+15	2.513e+15	2.513e+15
4.188e+15	4.188e+15	4.188e+15	4.188e+15
5.863e+15	5.863e+15	5.863e+15	5.863e+15

Source: authors' projection using Python

The period 2017-2019 shows negative and constant values of the discriminant function, indicating at the same time a stable period before the onset of the health crisis. Starting in 2020, the values became negative, with lower absolute values, marking the beginning of the pandemic period. In 2021, the values became positive and continue to increase in the period 2022-2024, indicating a stabilization in the post-COVID period.

The application of this quantitative method highlights the effectiveness of LDA in separating the pre- and post-COVID-19 periods. Thus, terms associated with digital transformation and blockchain are closely associated with the pre-COVID period, while terms such as teleworking and cybersecurity are more associated with the post-COVID period. The distribution of the values in the discriminant function reflects the transition from the pre- to the post-medical crisis period, with a significant change in 2020, the time of the pandemic outbreak, and a stabilization in the following period.

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The results highlight a stronger association of terms such as "Digital transformation" and "Blockchain" with the period before the healthcare crisis, while also reflecting the dominant concerns before the outbreak of the global crisis. In contrast, the terms "Teleworking" and, to a lesser extent, "Cybersecurity" are significantly correlated with the post-COVID period, illustrating the structural changes generated by the outbreak of the pandemic, thus, the analysis of the values obtained in the discriminant function indicates a transition starting in 2020, followed by a progressive stabilization of the new organizational discourse in the period 2021-2024.

Hypothesis 4: Topic analysis highlights a diversification of the main topics addressed by companies, with an emphasis on topics related to digitization in the pandemic period.

The LDA method generates the ordering of the terms as a conclusive result, the sequence reflecting the importance and relative weight of each term in the context of the topic. The first four terms in each category are fundamental to the interpretation as they have the highest statistical weights and best illustrate the thematic core.

The ordering of the terms reveals different thematic priorities: Topic_0 predominates with teleworking as the main concern, followed by digitization, indicating immediate pandemic response priorities, while Topic_1 prioritizes digitization. Topic_3's leading position on blockchain indicates a focus on technological innovation, while Topic_4's focus on cybersecurity reflects security-focused approaches to digital transformation.

Following the application of the topic modelling method identified in the corporate discourse, through the Latent Dirichlet Allocation (LDA) algorithm on a dataset capturing the presence and frequency of digital concepts in documents relevant to the pre- and post-pandemic period, five recurrent latent themes were identified, detailed in the table below.

Table 6. Dominant keywords on each topic identified by LDA

Topic	Related terms
Topic_0	teleworking, digitization, cybersecurity, blockchain, cloud migration, digital onboarding, digital integration, digital innovation, digital infrastructure, data center
Topic_1	digitization, teleworking, cybersecurity, blockchain, cloud migration, digital onboarding, digital integration, digital innovation, digital infrastructure, data center

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Topic_2	digitization, teleworking, cybersecurity, blockchain, cloud migration, digital onboarding, digital integration, digital innovation, digital infrastructure, data center
Topic_3	blockchain, cybersecurity, digitization, teleworking, cloud migration, digital onboarding, digital integration, digital innovation, digital infrastructure, data center
Topic_4	cybersecurity, digitization, teleworking, blockchain, cloud migration, digital onboarding, digital integration, digital innovation, digital infrastructure, data center

Source: authors' projection using Python

Topic_0 brings to the forefront concerns related to teleworking and digital security, while Topic_1 emphasizes digital infrastructure and technology integration. Topics 3 and 4, although semantically close, focus more on innovation and digital resilience, emphasizing the need for operational continuity and adaptability in the face of systemic shocks such as the COVID-19 pandemic.

Table 7. Percentage distribution of dominant topics, segmented by period

Period	Topic_0	Topic_1	Topic_3	Topic_4
Pre-COVID	66.67%	17.78%	4.44%	11.11%
Post-COVID	46.67%	36.00%	2.67%	14.67%

Source: authors' projection using Python

The data in the table above shows a considerable decrease in the importance of Topic_0 in the post-pandemic period, in parallel with a significant increase in the weight of Topic_1, suggesting a discursive transition from reactive, telecommunication, and security concerns to proactive investments in digital infrastructure and technological integration mechanisms. Topic_4 maintains a steady and slightly increasing weight, indicating that digital resilience has become a more prominent theme in the post-crisis landscape.

To complete the analysis and to answer the hypothesis more correctly, we also calculated the average LDA scores for each topic (Table 7), separately for the two periods, to observe not only the distribution of dominant themes but also the average level of thematic association per document.

Table 8. Average scores per topic, per period analyzed

Period	Topic_0	Topic_1	Topic_2	Topic_3	Topic_4
Pre-COVID	0.1653	0.2525	0.1653	0.1823	0.2345
Post-COVID	0.1484	0.3389	0.1416	0.1561	0.2151

Source: authors' projection using Python

The calculated averages confirm the observations established above, while Topic_0 and Topic_2 show a decrease in intensity, Topic_1 increases markedly in the post-COVID period, indicating a clear orientation towards digital infrastructure capacity building. Likewise, Topic_4 maintains a constant relevance, and Topic_3, although under-represented in percentage terms, registers a slight increase in the pandemic period, suggesting an activation of the digital innovation discourse in the context of new socio-economic realities.

Overall, the results support the idea of a transition in the companies' digital discourse from a phase centred on immediate adaptation and ensuring the basic functioning of digital services to one oriented towards strategic development, structural consolidation, and coherent integration of emerging technologies.

Following the calculations presented, the fourth hypothesis is confirmed, and the results obtained support the hypothesis that the COVID-19 pandemic has led to an acceleration and, implicitly, a diversification and a reconfiguration of the themes addressed in the official discourse on digital transformation, with major implications for the long-term institutional strategy.

The results highlight a decreased emphasis on telework and security issues in the post-pandemic period, along with a marked increase in interest in strengthening digital infrastructure and technology integration. In addition, the maintenance and slight increase in the weight of topics closely related to digital resilience, as well as innovation, suggest a gradual maturing of the digitalization discourse, marking the transition from immediate reactions to a long-term strategic vision of digital transformation.

Hypothesis 5: Regression models with dummy variables confirm the statistically significant effect of the COVID-19 crisis on the frequency of use of technological terminology in corporate communications.

The regression model associated with the keyword "teleworking", presented in detail in the table below, demonstrates a robust statistical fit, evidenced by an F-test value of 4.82 ($p = 0.0097$).

Table 9. Regression results for "teleworking"

Variable	Coefficient	Std Error	t-value	P> t	[0.025	0.975]
Intercept	44.450	18.807	2.363	0.020	7.204	81.697
An	-0.220	0.009	-2.363	0.020	-0.040	-0.000
Post COVID	0.136	0.044	3.075	0.003	0.048	0.223
Model Statistics						
F-statistic	4.823	-	-	0.0097	-	-

Source: authors' projection using Python

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The coefficient associated with the time variable 'An' ($\beta = -0.0220$, $p = 0.020$) is negative and statistically significant at a threshold of $\alpha = 0.05$. The 95% confidence interval for this coefficient $[-0.040, -0.004]$ excludes zero, confirming the robustness of the result.

Also, the coefficient of the dummy variable "Post_COVID" ($\beta = 0.1356$, $p = 0.003$), shows a positive and statistically significant value at a threshold of $\alpha = 0.01$. The 95% confidence interval of $[0.048, 0.223]$ is positive and relatively narrow, indicating the precision of the estimation; thus, it highlights the pronounced positive effect of the post-COVID-19 period on the frequency of use of the term "teleworking", after controlling for pre-existing time trends.

The model results support the hypothesis that the COVID-19 pandemic represented a significant inflection point in the discourse related to telework. The contrast between the negative coefficient associated with the time variable and the substantial positive coefficient associated with the post-COVID period indicates a fundamental reconfiguration of the evolutionary trend in the term 'teleworking'. The magnitude of the post-COVID effect ($\beta = 0.1356$) is substantial in the context of the overall annual trend ($\beta = -0.0220$), suggesting that the pandemic has generated a change equivalent to about 6.16 years of natural evolution of the term (calculated as the ratio of the coefficients: $0.1356/0.0220$), but in the opposite direction.

The regression model for the term 'digitization', presented in detail in the table below, also indicates a significant level of statistical adequacy, evidenced by an F-test value of 4.07 ($p = 0.0195$).

Table 10. Regression results for "digitization"

Variable	Coefficient	Std Error	t-value	P> t	[0.025	0.975]
Intercept	73.173	64.263	1.139	0.257	-54.097	200.443
An	-0.036	0.032	-1.136	0.258	-0.099	0.027
Post COVID	0.356	0.151	2.359	0.020	0.057	0.654
Model Statistics						
F-statistic	4.070	-	-	0.0195	-	-

Source: authors' projection using Python

The coefficient associated with the variable 'An' ($\beta = -0.0362$, $p = 0.258$) has a negative value but does not reach the threshold of statistical significance ($\alpha = 0.05$). The 95% confidence interval $[-0.099, 0.027]$ includes the value zero, indicating substantial uncertainty about the direction and magnitude of the overall time effect. In contrast, the coefficient of the dummy variable "Post_COVID" ($\beta = 0.3555$, $p = 0.020$) is positive and statistically significant at the threshold $\alpha = 0.05$. The 95% confidence interval $[0.057, 0.654]$, although relatively wide, excludes the value zero

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and supports the robustness of the finding. The substantial magnitude of this coefficient indicates a pronounced increase in the frequency of the use of the term "digitization" in the post-pandemic period, independent of any pre-existing temporal trend.

The model results provide empirical support for the hypothesis that the COVID-19 pandemic has been a significant catalyst for digitalisation discourse. The absence of a significant temporal trend before the pandemic, in conjunction with the strong positive effect of the post-COVID period, suggests that the pandemic was an inflection point in the conceptual adoption of digitization.

The considerable magnitude of the post-COVID effect ($\beta = 0.3555$) indicates a transformation of the frequency of the term "digitization" in the analysed discourse. Although the overall temporal trend does not reach statistical significance, its potential negative direction further emphasizes the importance of the pandemic effect: in the context of a possible previous downward trend, the pandemic generated not only a stabilization but a significant increase in the conceptual presence of digitization.

The hypothesis that the health crisis generated by COVID-19 had a significant impact on the frequency and intensity of the use of digitization-specific terminology in official discourse, as evidenced by the estimation of regression models with dummy variables, is confirmed for the terms "teleworking" and "digitization", and statistical analyses indicate a substantial and significant change in the dynamics of these terms in the post-pandemic period, after controlling for pre-existing temporal trends.

As a conclusion, the results of the regression models validate Hypothesis 5, demonstrating that the COVID-19 pandemic acted as a catalyst for the intensification and reconfiguration of the corporate discourse of the companies listed on the Bucharest Stock Exchange. The observed changes do not appear to be simple extensions of pre-existing trends, but direct and substantial responses to the new pandemic context, with important implications for understanding the accelerated digital transformation processes in the institutional and professional environment.

5. Discussion and Recommendations

The findings of this study provide empirical support for the transformative impact of the COVID-19 pandemic on corporate digital discourse, while offering new insights specific to the Romanian capital market context. The significant increase in digitalization-specific terminology identified through the application of TF-IDF corroborates the findings of Soto-Acosta (2020), who pointed out that the mobility restrictions and social distancing measures imposed by the pandemic have caused

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fundamental changes in the functioning of society, necessitating rapid transformations of traditional operational models.

The LDA application results, which identified a major thematic reconfiguration from blockchain and automation-centered concerns to dominant themes related to digital infrastructure and cybersecurity, align with the digital transformation outcomes documented by Verhoef et al. (2021). Our findings provide evidence that this acceleration has not been limited to operational implementation, but has extended to the prioritization of strategic discourse, with firms fundamentally restructuring their focus on communication to emphasize security concerns.

The regression analysis confirming the statistically significant effect of the COVID-19 crisis on the frequency of technology terminology resonates with the empirical findings of McKinsey & Company (2022), which demonstrated that organizations that adopted advanced digital solutions in the post-crisis period experienced productivity increases of up to 25% compared to entities that maintained traditional models.

However, our findings also reveal some divergence from the existing literature. The modest and statistically insignificant increase in cybersecurity terminology contrasts with the increased cybersecurity concerns documented in various post-pandemic studies. Also, the decrease in vocabulary associated with blockchain represents another departure from global trends, suggesting that while some digital technologies gained prominence during the pandemic, others received little attention in corporate communications.

The methodological framework developed in this study provides a basis for several directions for future research. First, comparative studies across different emerging European markets could examine whether the patterns identified in Romania are representative of broader regional trends or reflect country-specific characteristics. Second, longitudinal extensions of this research could examine the long-term sustainability of the identified discourse shifts in the stabilization period 2022-2024, or in the period before the health crisis.

6. Conclusions

By investigating the five hypotheses proposed in the research, we highlight a number of perspectives on how the COVID-19 pandemic has influenced the digital discourse of companies listed on the Bucharest Stock Exchange, especially in the context of digital transformation and adaptation to new socio-economic realities.

In testing Hypothesis 1, there is a significant correlation between the terms "teleworking" and "digitization" and the post-pandemic period, indicating a significant increase in concerns related to digitization and teleworking.

By validating Hypothesis 2 through regression analysis, we have demonstrated that digitization and cybersecurity have become central themes of institutional discourse in the post-COVID period, especially in terms of digital infrastructure and data protection.

Hypothesis 3 was validated by applying the Latent Dirichlet Allocation (LDA) method, which allowed us to identify a significant shift in the dominant topics, reflecting a transition from automation and blockchain themes, specific to the pre-pandemic period, to telework and cybersecurity themes, emphasized in the post-COVID period.

Regarding Hypothesis 4, from the modelling of the topics identified in the corporate discourse, we identify a considerable diversification of the topics addressed, with a focus on concerns related to digital infrastructure and digital resilience in the post-pandemic period.

Finally, by testing Hypothesis 5, we revealed a significant shift in the use of terminology related to "teleworking" and "digitization", confirming that the COVID-19 pandemic was a catalytic factor in intensifying and reconfiguring digital discourse. The regression models showed that, in the post-pandemic period, these themes became fundamental to the development of institutional strategies for adapting to new working conditions and digital infrastructure.

Through the integrated testing of the five hypotheses, we highlight a major shift in digital discourse and institutional priorities in the post-pandemic period, all the results obtained contributing to the main objective initially set. The COVID-19 pandemic acted as an accelerating factor of the digital transformation, triggering a transition from reactive concerns about ensuring the basic functioning of digital services to proactive and structural strategies for adapting and integrating new technologies.

Despite the comprehensive nature of this research, a number of gaps were also identified, which may lay the foundation for future research. First, the analysis focused exclusively on annual financial reports, which represent formal corporate communications but may not capture the full spectrum of digital discourse. Second, the keyword-based approach, while systematic and replicable, may have omitted nuanced expressions of digital transformation that do not explicitly use predefined terminology. Entities may discuss digital initiatives using sector-specific language or implicit references that were not captured by the TF-IDF analysis, which may underestimate the true extent of digital discourse transformation.

The findings and methodological framework developed in this study demonstrate a potential for application to other emerging market economies, particularly those that share similar economic development characteristics, institutional frameworks, and digital transformation trajectories as Romania. Countries such as Bulgaria, Hungary,

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Poland, the Czech Republic, and Slovakia, which share similar post-communist economic transitions and emerging market characteristics, could capitalize on similar methodologies to understand the evolution of their corporate digital discourse in the context of crisis periods. However, successful application in other countries would require careful consideration of context-specific factors, including linguistic differences, regulatory frameworks, cultural attitudes towards digital technology, and the maturity of capital markets.

Keyword-based TF-IDF analysis, while objective and reproducible, suffers from the inherent limitation of predetermined terminology selection, which may introduce biases and omit emerging or context-specific expressions of digital transformation that do not align with the predefined vocabulary.

The use of the LDA method requires a subjective interpretation of the coherence and relevance of the theme, introducing a potential bias in the identification and labeling of themes. The algorithm's assumption that documents may be represented as mixtures of topics may not adequately capture the complexity of corporate discourse, in which themes may be interdependent or contextually contingent, rather than independently distributed.

The findings of this research generate various implications for the wider business community, which extend beyond academic contributions to practical applications for several stakeholder groups involved in digital transformation processes. In terms of investors, the study provides insights into how crisis events influence firms' strategic communication, enabling a more informed assessment of firms' digital transformation readiness and long-term adaptive capabilities, particularly in emerging market contexts.

In terms of corporate management and strategic planning, the study provides a benchmarking perspective on communication strategies for digital transformation and emphasizes the importance of proactively, rather than reactively, managing digital discourse.

Finally, with reference to the academic and research community, the study establishes a methodological basis for future research in corporate digital discourse analysis and provides empirical evidence for the relationship between crisis events and organizational strategic communication. The multi-methodological approach and longitudinal design contribute to the development of useful analytical frameworks for understanding corporate behavior during periods of transformation, supporting the advancement of knowledge in areas such as strategic management, organizational behavior, and digital transformation studies.

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References

1. Barrero, J. M., Bloom, N., Davis, S. J., (2021), Why working from home will stick, *Journal of Economic Perspectives*, 35(1), 187-210.
2. Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., Venkatraman, N., (2013), Digital business strategy: toward a next generation of insights, *MIS Quarterly*, 37(2), 471-482.
3. Blichfeldt, H., Faullant, R., (2021), Performance effects of digital technology adoption and product & service innovation—A process-industry perspective, *Technovation*, 105, 102275.
4. Bloom, N., Liang, J., Roberts, J., Ying, Z. J., (2015), Does working from home work? Evidence from a Chinese experiment, *Quarterly Journal of Economics*, 130(1), 165-218.
5. Bockshecker, A., Hackstein, S., Baumöl, U., (2018), Systematization of the Term Digital Transformation and its Phenomena from a Socio-Technical Perspective - a Literature Review. Paper presented at the 25th European Conference on Information Systems (ECIS), Portsmouth.
6. Chanias, S., Myers, M. D., Hess, T., (2019), Digital transformation strategy making in pre-digital organizations: The case of a financial services provider, *Journal of Strategic Information Systems*, 28(1), 17-33.
7. Chyzhevska, L., Voloschuk, L., Shatskova, L., Sokolenko, L., (2021), Digitalization as a Vector of Information Systems Development and Accounting System Modernization, *Studia Universitatis Vasile Goldiș Arad, Seria Științe Economice*, 31(4), 18-39. Retrieved from <https://publicatii.uvvg.ro/index.php/studiaeconomia/article/view/687>.
8. Correani, A., De Massis, A., Frattini, F., Petruzzelli, A. M., Natalicchio, A., (2020), Implementing a digital strategy: Learning from the experience of three digital transformation projects, *California Management Review*, 62(4), 37-56.

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Romanian Corporate Discourse within the Context of Digital Transformation: A Multi-methodological Longitudinal Analysis

9. Dănescu, T., Stejerean, R.M., Linca, E., (2025), Empirical Study on the Relationship between Digitization and Financial Performance. In V. Terziev (Ed.), *Sustainable Perspectives in Business, Economics and Education. Theoretical and Empirical Approaches* (pp. 245-267). Berlin, Germany: Peter Lang Verlag.
10. DeFilippis, E., Impink, S. M., Singell, M., Polzer, J. T., Sadun, R., (2020), Collaborating during coronavirus: The impact of COVID-19 on the nature of work, *Journal of Financial Economics*, 138(3), 558-577.
11. Eurofound. (2020), *Living, working, and COVID-19*. Publications Office of the European Union.
12. Fitzgerald, M., Kruschwitz, N., Bonnet, D., Welch, M., (2014), Embracing digital technology: A new strategic imperative, *MIT Sloan Management Review*, 55(2), 1-12.
13. Ghobakhloo, M., (2020), Industry 4.0, digitization, and opportunities for sustainability, *Journal of Cleaner Production*, 252, 119869.
14. Gurbaxani, V., Dunkle, D., (2019), Gearing up for successful digital transformation, *MIS Quarterly Executive*, 18(3), 209-220.
15. Hanelt, A., Bohnsack, R., Marz, D., Antunes Marante, C., (2021), A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change, *Journal of Management Studies*, 58(5), 1159-1197.
16. International Labour Organization, (2023), *The future of work in the post-pandemic era*. ILO Publications.
17. Katz, R., Callorda, F., (2018), Digital transformation and its impact on economic development, *Information Technologies & International Development*, 14(2), 1-15.
18. Kinkel, S., Baumgartner, M., Cherubini, E., (2022), Prerequisites for the adoption of AI technologies in manufacturing—Evidence from a worldwide sample of manufacturing companies, *Technovation*, 110, 102375.
19. Kossaï, M., de Souza, M. L. L., Zaied, Y. B., Nguyen, P., (2020), Determinants of the adoption of information and communication technologies (ICTs): The case of Tunisian electrical and electronics sector, *Journal of the Knowledge Economy*, 11(3), 845-864.
20. Kraus, S., Clauss, T., Breier, M., Gast, J., Zardini, A., Tiberius, V., (2020), The economics of COVID-19: initial empirical evidence on how family firms in five European countries cope with the corona crisis, *International Journal of Entrepreneurial Behavior & Research*, 26(5), 1067-1092.
21. Li, K., Griffin, D., Yue, H., Zhao, L., (2018), How does culture influence corporate risk-taking?, *Journal of Corporate Finance*, 23, 1-22.
22. Matt, C., Hess, T., Benlian, A., (2015), Digital transformation strategies, *Business & Information Systems Engineering*, 57(5), 339-343.
23. McKinsey & Company, (2022), *How COVID-19 has pushed companies over the technology tipping point—and transformed business forever*. McKinsey Global Survey.
24. Mikalef, P., Boura, M., Lekakos, G., Krogstie, J., (2019), Big data analytics and firm performance: Findings from a mixed-method approach, *Journal of Business Research*, 98, 261-276.
25. Nambisan, S., Wright, M., Feldman, M., (2019), The digital transformation of innovation and entrepreneurship: Progress, challenges, and key themes, *Research Policy*, 48(8), 103773.

Dănescu, T., Stejerean, R.M., (2025)

Romanian Corporate Discourse within the Context of Digital Transformation: A Multi-methodological Longitudinal Analysis

26. Ohlert, C., Giering, O., Kirchner, S., (2022), Who is leading the digital transformation? Understanding the adoption of digital technologies in Germany, *New Technology, Work and Employment*, 37(3), 445-468.
27. Onețiu, D. D., (2020), The Impact of Social Media Adoption by Companies. *Digital Transformation, Studia Universitatis Vasile Goldiș Arad, Seria Științe Economice*, 30(2), 83–96. Retrieved from <https://publicatii.uvvg.ro/index.php/studiaeconomia/article/view/648>
28. Omrani, N., Rejeb, N., Maalaoui, A., Dabić, M., Kraus, S., (2024), Drivers of digital transformation in SMEs, *IEEE transactions on engineering management*, 71, 5030-5043.
29. Orecchini, F., Valitutti, V., Vitali, G., (2018), Industry and academia for a transition towards sustainability: advancing sustainability science through university–business collaborations, *Sustainability Science*, 13(6), 1377-1394.
30. Papadopoulos, T., Baltas, K. N., Balta, M. E., (2020), The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice, *International Journal of Information Management*, 55, 102192.
31. Priyono, A., Moin, A., Putri, V. N. A. O., (2020), Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic, *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 104.
32. Radicic, D., Petković, S., (2023), Impact of digitalization on technological innovations in small and medium-sized enterprises (SMEs), *Technological Forecasting and Social Change*, 191, 122474.
33. Soto-Acosta, P., (2020), COVID-19 pandemic: Shifting digital transformation to a high-speed gear, *Information Systems Management*, 37(4), 260-266.
34. United Nations Environment Programme, (2020), *Emissions Gap Report 2020*. UNEP.
35. Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., Haenlein, M., (2021), Digital transformation: A multidisciplinary reflection and research agenda, *Journal of Business Research*, 122, 889-901.
36. Vial, G., (2019), Understanding digital transformation: A review and a research agenda, *Journal of Strategic Information Systems*, 28(2), 118-144.
37. Wang, B., Liu, Y., Qian, J., Parker, S. K., (2021), Achieving effective remote working during the COVID-19 pandemic: A work design perspective, *Applied Psychology*, 70(1), 16-59.