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Digital Transformation and Business Model Innovation in the Post-COVID Era: A Bibliometric Analysis of Financial and Organizational Perspectives

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Abstract: The digital revolution has fundamentally transformed the business environment in recent decades, but the COVID-19 pandemic has strengthened this course, acting as a powerful accelerator. Within a short period of time, businesses have been faced with the need to immediately adapt to new conditions, adopting digital technologies and redesigning their business models. VOSviewer is a specialized scientific data analysis and visualization tool, which was used to study the relationship between Digital Transformation and Business Model Innovation. The analysis was based on 150 publications from the Scopus database (2020–2025) and highlighted five thematic groups, such as business performance, economic growth and sustainability.

Keywords: Digital Transformation; Financial Perspectives; Organizational Perspectives; Post-COVID Era



Introduction

The digital revolution has brought about radical changes in the business environment over the past decades, with the COVID-19 pandemic acting as a catalyst that accelerated digital transformation to a new extent. Businesses were called upon to respond immediately to the new conditions, adopting digital technologies and redesigning their business models, in order to ensure their sustainability and enhance their competitiveness in a different and changing environment. This forced transition highlighted the fundamental importance of digital transformation, not only as a technological upgrade, but also as a strategic analysis with a direct impact on the structure, operations and, ultimately, the financial performance of products. Basically, digital transformation consists of the full and coherent integration of digital technologies into every aspect of business activity, leading to substantial changes in the way of operating and providing value to the customer. Technologies commonly involved in this process include artificial intelligence (AI), big data analytics, the Internet of Things (IoT), cloud computing and blockchain. Business model innovation, meanwhile, is about rethinking how economic value is created, delivered and captured. In the post-COVID-19 era, these two concepts are proving to be closely intertwined. Digitalization is no longer limited to optimizing existing processes, but is the foundation for the development of radically new business models, such as sharing platforms, subscription-based services and solutions tailored to individual consumer needs. The pandemic has significantly intensified the need for digital transformation, with travel restrictions and a massive shift to remote work, leading to investments in digital infrastructure to maintain business continuity. At the same time, changing consumer preferences, with increased demand for online shopping and digital services, have pushed businesses to strengthen their digital presence and reshape their supply chains.

As a result, the ability of businesses to leverage digital transformation to innovate their business models is becoming increasingly critical for their resilience and competitiveness in the post-COVID era. Despite the importance of the issue, there is a lack of a comprehensive and systematic understanding of the relationship between digital transformation and business model innovation, especially in light of the economic and organizational impacts. Although the existing literature is extensive, it is often fragmented in terms of the thematic areas and sectors it covers. For example, while many studies investigate the impact of digital transformation on financial performance, fewer focus on the role of business model innovation as a mediating factor or on the organizational restructuring needed for its successful implementation. The particular context of the post-COVID era adds additional complexity, as businesses are faced not only with technological challenges, but also with unprecedented economic and social uncertainties (Petropoulou et al., 2024).

The aim of this study is to conduct a systematic bibliometric analysis of the current scientific production regarding digital transformation and business model innovation in the post-COVID era, with an emphasis on the economic and organizational dimensions. Through this approach, the aim is to capture the dominant research trends, highlight key scientists and scientific journals active in the field, identify existing research gaps and formulate proposals for future research directions. Bibliometric analysis, as a quantitative methodology, allows for mapping the scientific landscape, highlighting thematic connections and identifying areas that remain insufficiently researched. Issues such as: What is the impact of digital transformation and business model innovation on the economic performance of products after the pandemic? How do organizational structures, cultural components and required skills change in the new environment? What challenges arise for businesses in different sectors? The expected findings of this study do not provide a comprehensive picture of the field, to enhance the



understanding of the complex relationships between digital transformation, business model innovation, and financial implications.

Research Results

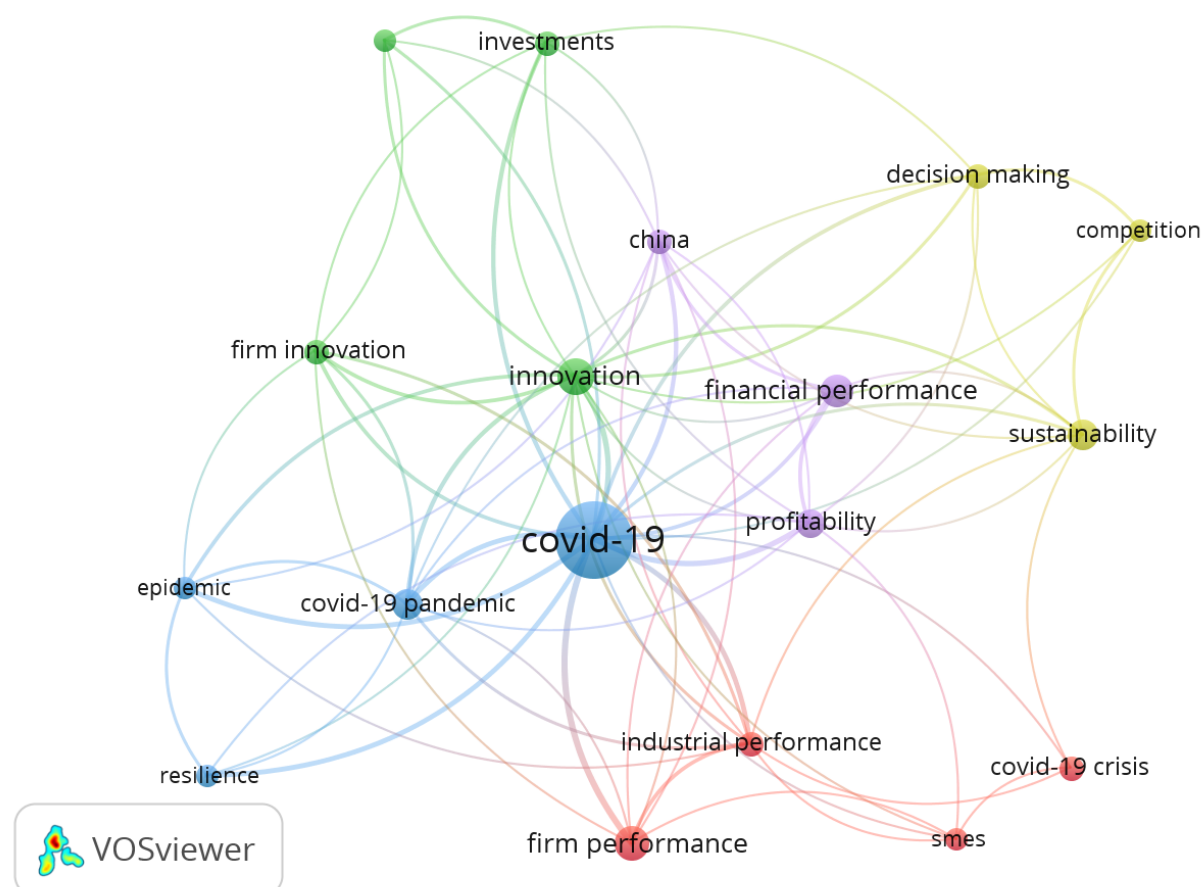
VOSviewer is a specialized and powerful tool for the analysis and visualization of scientific data, which is widely used in the academic and research field. Its main functionality focuses on revealing and understanding the relationships between different elements such as keywords, authors, subject areas or scientific publications. Through the use of network analysis techniques, VOSviewer creates interactive maps and visual networks, which clearly illustrate the connections and correlations between the individual elements. This offers an easy-to-use and visually understandable framework for identifying scientific trends, thematic categorization and mapping research activity (Papanikolaou et al., 2024). The tool is particularly useful for studying scientific collaboration between researchers and institutions, as well as for monitoring the evolution of specific fields of knowledge over time. The use of VOSviewer requires the existence of organized bibliographic data, which are usually drawn from internationally recognized indexing databases, such as Scopus, Web of Science and other similar platforms.

In the context of this analysis, data were extracted from the Scopus database, with the aim of identifying publications related to topics such as Digital Transformation and Business Model Innovation. The keywords used included the terms "Digital Transformation", "Business Model Innovation", "Financial", "Organizational", "Post-COVID" and "Firm". The search was carried out without time limitation, covering the full scope of the database. A total of 150 publications were extracted for the period 2020-2025. Of these, 68 publications were recorded in the two most recent years (2024-2025), while the period 2020-2021 included 26 publications, indicating increased research interest in recent years. Data processing in VOSviewer resulted in the creation of five thematic groups based on the relevance and frequency of keywords in the selected publications. Group 1 focused on concepts related to business performance, group 2 included terms related to economic growth, group 3 concerned innovation, group 4 sustainability, while group 5 focused on concepts related to profitability.

Digital Transformation and Business Model Innovation are two interrelated and defining concepts for modern entrepreneurship. Digital transformation is about integrating modern technologies - such as cloud computing, artificial intelligence, big data and the Internet of Things (IoT) - into every function of the organization, bringing about fundamental changes in the way it operates and in the provision of value to the customer. Accordingly, business model innovation is the strategic restructuring of the overall business logic, responding to the demands of the digital age. Their combination offers competitive advantages, enhances adaptability and allows businesses to innovate in a sustainable and effective way.

Figure 1

Overlay map of keyword co-occurrence over time for papers published



Conclusions

This study highlighted the fundamental importance of digital transformation and business model innovation in the modern business environment, especially in the context that emerged after the COVID-19 pandemic. The use of the VOSviewer tool proved to be extremely valuable for mapping the research field, facilitating the visual representation of the correlations between key terms and the emergence of dominant thematic trends. Data extraction from the Scopus database revealed a clear strengthening of scientific interest in the subject under study, with a significant increase in relevant publications during the period 2020-2025. Through bibliometric analysis, five distinct thematic clusters were identified: business performance, economic growth, innovation, sustainability and profitability. These themes highlight the interdisciplinary dimension of the issue and highlight the multi-layered nature of the impacts of digital transformation and business model innovation. The interaction between these two concepts is considered crucial for maintaining business viability and enhancing competitiveness, as the integration of modern technologies and the strategic reshaping of business approaches are key factors in adapting to the demands of the digital age. The continuation of research activity in the above thematic axes is expected to strengthen theoretical understanding and support the development of more effective and sustainable strategies for business.



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