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The impact of digitalization on the value creation and the financial performance of companies. A literature review

L'impact de la digitalisation sur la création de valeur et la performance financière des entreprises : une synthèse de littérature

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Abstract

Since the emergence of the concept of " digitalization " and its adoption by the professional sphere, an eminent need for measurement and control has followed for efficient management of the performance of firms.
Digitalization has become increasingly important in today's business world, as it enables organizations to streamline processes, enhance productivity, and improve customer experiences. By leveraging digital technologies, firms can automate routine tasks, reduce errors, and gain insights from large data sets that help them make more informed decisions. Additionally, digitalization promotes collaboration and communication, both internally and externally, making it easier for teams to work together and share information. This, in turn, increases efficiency and reduces the time and costs associated with traditional communication methods.
The purpose of this article is based on a critical analysis of scientific papers to identify firstly the main factors, issues, and challenges of digitization as well as the tools and indicators chosen by the literature for performance measurement, secondly to study the theoretical contribution of digitalization to the improvement of business performance. More specifically, we focused our bibliographic research on the use of digital practices and their impact on the financial performance.
Overall, this article provides insights into the relationship between digitalization and business performance. It highlights the importance of measuring and monitoring the impact of digital practices on financial performance and the need to consider the context in which these practices are implemented.
The results have shown, on the one hand, that digitalization has a positive impact on the financial performance of companies, and on the other hand, in different contexts, that digitalization has a negative impact on financial performance. This multitude of results is mainly due to the change in the context and the measurement variables.

Keywords: Digitalization, financial performance, firms, innovation, value creation.
JEL Classification: M15
Paper type: Theoretical research

Résumé

Depuis l'émergence du concept de "digitalisation" et son adoption par la sphère professionnelle, un besoin éminent de mesure et de contrôle s'en est suivi pour une gestion efficace de la performance des entreprises.
La digitalisation est devenue de plus en plus importante dans le monde des affaires d'aujourd'hui, car elle permet aux organisations de rationaliser les processus, d'accroître la productivité et d'améliorer l'expérience des clients. En tirant parti des technologies digitales, les entreprises peuvent automatiser les tâches de routine, réduire les erreurs et obtenir des informations à partir de vastes ensembles de données qui les aident à prendre des décisions plus éclairées. En outre, la digitalisation favorise la collaboration et la communication, tant en interne qu'en externe, ce qui permet aux équipes de travailler plus facilement ensemble et de partager des informations. Cela permet d'accroître l'efficacité et de réduire le temps et les coûts associés aux méthodes de communication traditionnelles.
L'objectif de cet article est basé sur une analyse critique des articles scientifiques pour identifier d'une part les principaux facteurs, enjeux et défis de la digitalisation ainsi que les outils et indicateurs choisis par la littérature pour la mesure de la performance, d'autre part pour étudier l'apport théorique de la digitalisation à l'amélioration de la performance des entreprises. Plus précisément, nous avons axé notre recherche bibliographique sur l'utilisation des pratiques de digitalisation et leur impact sur la performance financière.
Dans l'ensemble, cet article apporte un éclairage sur la relation entre la digitalisation et la performance des entreprises. Il met en évidence l'importance de la mesure et du suivi de l'impact des pratiques digitales sur la performance financière et la nécessité de prendre en compte le contexte dans lequel ces pratiques sont mises en œuvre.
Les résultats ont montré, d'une part, la digitalisation a un impact positif sur la performance financière des entreprises, et d'autre part, dans des contextes différents, la digitalisation a un impact négatif sur la performance financière. Cette multitude de résultats est principalement due au changement du contexte et des variables de mesure.

Mots clés : création de valeur, digitalisation, entreprises, innovation, performance financière.
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1. Introduction

Digitalization is rapidly changing the way companies operate and compete in today's global economy. It is no longer a question of whether a business should implement digital tools and technologies, but rather how to effectively leverage them to achieve a competitive advantage. Digitalization offers a wide range of benefits for firms from automating processes to analyzing data and connecting with customers. However, the road to digitalization is not without challenges, from a lack of skills and resources to resistance to change. In this article, we will delve into the concept of digitalization and its impact on firms, examining the key drivers, benefits, and challenges of digitalization for organizations of all sizes and industries.

Digitalization refers to the integration of digital technologies into all aspects of business, including operations, processes, products, and services. This process of digital transformation is driven by the increasing availability and use of digital technologies such as cloud computing, big data analytics, the Internet of Things (IoT), artificial intelligence (AI), and machine learning (ML).

The adoption of digitalization has become a crucial strategy for firms looking to stay competitive in today's digital economy. By leveraging these technologies, businesses can improve efficiency, productivity, and customer engagement and gain insights into market trends and customer behavior. Digitalization also allows companies to expand their reach and tap into new markets, creating new revenue streams and business models.

However, digitalization is not without its challenges. For firms, the process of digitalization requires significant investment in technology, skills, and culture change. And it can be difficult to know where to start and how to measure the impact of digitalization on their performance. This is why it's important for firms to have a clear and well-defined digitalization strategy, considering the specific needs and goals of the organization, and involving all stakeholders in the process.

The digitalization of businesses has become an increasingly important issue in today's economy, with companies looking for ways to improve their operations and competitiveness using technology. However, it remains unclear to what extent digitalization can lead to improve the financial performance for firms. The central problem of this study will be to examine the relationship between digitalization and financial performance in firms. Specifically, we will investigate the factors that enable or hinder the impact of digitalization on financial performance, and the strategies that firms can use to maximize the positive effects of digitalization on their financial performance.

This article provides an examination of the effect of digitalization on the financial performance within firms. Firstly, we conduct a comprehensive review of the literature to explore the historical development of the digitalization concept, its explanatory factors, context, as well as its characteristics and aspects. Additionally, we will define the concept of financial performance and performance in general. We will subsequently examine the impact of digitalization on the financial performance by analyzing relevant scientific articles. Lastly, we will put forth suggestions for firms to enhance their financial performance through digitalization.

This study provides a solid foundation for decision-makers and researchers seeking to understand the impact of digitalization on the financial performance of companies.

2. Conceptual framework of digitalization

2.1 Evolution of digitalization's concept

2.1.1 Historical evolution of digitalization

The historical evolution of digitalization can be divided into several key stages. In the early adoption stage, a few visionary companies began experimenting with digital technologies,

primarily for data storage and retrieval. These early adopters were often large companies in sectors such as finance and manufacturing.

With the advancement of technology and the decrease in costs of digital equipment, a growing number of companies have embraced digital technologies. This led to the automation of many tasks and the ability to collect and analyze large amounts of data. Many companies began to see the benefits of digitalization in terms of efficiency and cost savings.

Digitalization has become a crucial aspect of companies to survive and succeed in the constantly evolving digital landscape. Companies realized that digitalization was no longer just a means to improve efficiency, but a strategic imperative for survival. Companies began investing in digital technologies such as enterprise resource planning (ERP) systems and customer relationship management (CRM) and digital marketing systems.

Over the last few years, there has been a significant focus on developing smart connected systems and digital twins, which allow companies to gain real-time insights into their operations, optimize processes, and improve decision-making. The emergence of Industry 4.0 and the Internet of Things (IoT) has further accelerated the pace of digitalization.

The COVID-19 pandemic has had a profound impact on the pace of digitalization. With the sudden need to adapt to new forms of work and communication, organizations, governments, and individuals have had to rapidly embrace digital solutions. This has led to an acceleration of digitalization across various sectors. Many companies have had to digitalize their operations quickly to survive the crisis and stay competitive in the market. The pandemic has underscored the importance of digital technologies, as they have enabled companies to maintain their operations remotely and provide services to their customers without physical contact.

2.1.2 Evolution of the definition of digitalization

The definition of digitalization has evolved over time. Initially, it mainly referred to the digitization of information, the conversion of analog information into digital information that can be stored, processed, and transmitted electronically. Over the years, however, the definition of digitalization has expanded to include other aspects such as connectivity, automation, data analysis, transparency, personalization, and mobility. With the emergence of the Internet and mobile technologies, digitalization has become even more important for businesses, governments, and individuals. Businesses are digitalizing to stay competitive, improve efficiency, and meet their customer's needs. Governments are digitalizing to improve the efficiency of their services and programs. Individuals are digitalizing to access information, communicate, and access services online.

2.2 Definition of digitalization’s concept

Digitalization is the use of new digital technologies that greatly improve a company's activities and influence all aspects of a customer's life Digitalization is traditionally understood as the transformation of existing processes into a digital format, resulting in financial and operational efficiencies. Digitalization refers to the material process of converting analog information flows into digital bits (Brennen and Kreiss 2016).

Digitalization is considered the set of changes that digital technology causes or influences in all aspects of human life according to (Benkaraache Taoufik & Ghanouane Karim, (2020).It is defined as the use of technology to radically improve the performance or reach of businesses, according to Westerman et al. (2012) and (Benkaraache Taoufik & Ghanouane Karim, (2020). It goes beyond the simple digitization of resources and generates value and revenue from digital assets according to Fitzgerald & al. (2013) and McDonald & Rowsell-Jones (2012)

The term "digital transformation" encompasses much more than simply incorporating new technologies. It represents a fundamental shift in business models, encompassing a change in approach to internal and external processes. To fully realize the benefits of digitalization, companies must cultivate new skills, foster a supportive corporate culture, and adopt innovative

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organizational and operational models (Eller, & al.,2020). The potential benefits of digital transformation are significant and include increased efficiency, speed, and quality of work, cost savings, improved asset utilization, and overall business efficiency.

According to some authors, digitalization revolves around integrating and using innovative technology tools (Ross, & al., 2017). Digitalization is the constant use of innovative digital tools. Reis et al. (2018) synthesize all these aspects and propose that digitalization is the use of new digital technologies that greatly improve a company's activities and influence all aspects of a customer's life.

The term “digitize” describes the process by which any form of data is converted into a digital format. The term “digitalization” goes beyond simply digitization (Apte & Nerlekar 2020)

Digitalization refers to a total transformation of the company (Ross, & al., 2017). It aims for both the speed of expression and the completeness of the transformation. Compared to the digitization, digitalization refers to those in the business world who have perceived the challenge and acted accordingly. On the other hand, the term "digitization" is assigned to those who have not made any effort or have not understood the challenge (Moatti, 2016).

According to Collin & al. (2015), Gimpel & Röglinger (2015), and Kane & al. (2015), while digitization typically refers to the straightforward conversion of analog information into digital form, the terms "digital transformation" and "digitalization" are often used interchangeably and encompass a wider array of political, commercial, and social issues. They refer to the integration of innovative digital technologies related to the Internet into a company's operations (Benkaraache Taoufik & Ghanouane Karim, 2020).

Digitalization offers tremendous opportunities for improving efficiency, speed, and quality of work, reducing costs, enhancing asset utilization, optimizing the use of raw materials, labor, and other key aspects of business performance. It is a complex phenomenon that encompasses various levels, including digital entrepreneurship, digital strategies, digital processes, and digital education (Kraus et al., 2019). However, orchestrating a successful digitalization effort can be challenging, as it requires restructuring existing processes, realigning strategic goals, and adjusting organizational structures (Hinings, Gegenhuber, & Greenwood, 2018).

Digitalization, as defined by Matzler & al. (2016) and Vendrell-Herrero & al. (2017), involves leveraging digital opportunities to create innovation. The combination of various technologies, such as cloud technologies, sensors, big data, and 3D printing, enables the development of entirely new products and business models that incorporate digital services within physical products (Abou-foul, Ruiz-Alba, & Soares 2021).

Digitalization can be defined simply as the use of digital technologies to create value for a company (Sommarberg & M¨akinen, 2019).

The concept of "digital transformation" is derived from the broader notion of "digitalization", which refers to the utilization of digital technologies to drive business innovation and generate new sources of revenue and value (Parida & al., 2019; Kohtamäki & al., 2019).

Therefore, within the framework of this paper, we understand the concept of digitalization as a comprehensive change in processes using innovative digital technologies, guided by a specific digital strategy, and supported by qualified digital capabilities, aimed at creating value and increasing business performance.

2.3 Explanatory factors and context of digitalization

Digitalization is a process that affects all aspects of society and the economy, and there are several factors that contribute to its progress. Technological advancements, changes in consumer behavior, government policies and regulations, as well as increased access to the internet and the popularity of mobile devices, are all key factors in digitalization. Companies are also increasingly being driven to digitize to stay competitive, realize cost savings, and meet the demands of their customers (Ejbari & Bouali, 2022). Digitalization also allows companies

to collect and analyze data on their customers and markets to make more informed decisions. Finally, it allows for greater flexibility and productivity of employees by enabling them to work remotely.

The Key Driver, Digital Technology, and Increased Availability of Data: The increasing adoption of the World Wide Web and digital technologies such as SMACIT (Social, Mobile, Analytical, Cloud, Internet of Things) has led to the birth of new forms of activity and sounded the alarm for traditional businesses, which must re-evaluate their activities to remain competitive. Businesses that cannot adapt to the digital evolutions risk becoming less attractive to customers and being left behind for more efficient businesses that can exploit the digital opportunities. Digital technologies have become ubiquitous in the lives of businesses and customers, who can easily access their competitors' products and compare them in terms of quality, price, and after-sales services. Therefore, businesses must undertake a digital transformation project to ensure their survival in a constantly evolving world (Ejbari & Bouali, 2022).

Changes in the Business Environment: Technological advancements have altered the technological landscape of the industry, as well as the legal conditions and infrastructure of countries (Hanelt & al., 2020). To maintain operations within these circumstances, companies have favored teleworking and reduced paper-based exchanges using digital tools. The company must adapt to see its possibilities for operation and improvement in line with predefined legal texts. Additionally, the infrastructure of countries must be up to par with these changes, with proper data storage capacities, appropriate transmission channels such as fiber optics, radio, and telecommunications networks supporting the digital transformation of national economies (Hanelt & al., 2020). This necessitates companies to operate within a local and international digital environment, thus prompting them to re-evaluate their strategies and rethink their business models to take advantage of these advancements and maintain their competitive advantage (Ejbari & Bouali 2022).

Shifting Competitive Landscape: Competition has been radically transformed by the emergence of digital technologies, which have enabled freer flow of information and led to new forms of commerce such as online platforms like Amazon and Alibaba. Barriers to entry for new competitors have been reduced or removed (Nadkarni & Prügl, 2020), allowing younger digital businesses to enter the market. Additionally, large data-rich companies are beginning to dominate many industries. The digital freedom of access to products and information also risks leading to the imitation and increased competition. As a result, companies are required to review their strategies to maintain their longevity and satisfy the changing expectations of their customers (Ejbari & Bouali 2022).

Changes in Customer Expectations: With the invention of mobile devices and the emergence of smartphones, laptops, and tablets, along with the development of international telecommunications infrastructure, a significant proportion of the world's population is connected (approximately 60% of the population) (Nadkarni & Prügl, 2020). These individuals increasingly rely on digital technologies in their daily lives and personal and professional relationships and expect to access a variety of digital resources, which bring new benefits and opportunities. As a result, consumer behavior has changed, preferences have shifted, and knowledge has evolved and been updated. Furthermore, thanks to online stores and the ability to make online payments, consumers no longer need to physically visit a location to make purchases and complete transactions (Nadkarni & Prügl, 2020). They can also evaluate purchased products and share their feedback with others to aid in making informed product choices. The feedback, provided in the form of comments or star ratings, can be positive or negative and can serve as free advertising for a product in the case of a good rating, or damage the brand image of the company in the opposite scenario (Ejbari & Bouali, 2022).

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Willingness to Adopt Technology and Support from Leadership: It can be argued that the "fuel" of digital transformation is a technology and the benefits that digital offers, while the "spark" and impetus driving this transformation is provided by leadership. This constitutes an interesting factor in initiating the digital transformation process within the organization. This spark of willingness to adopt digital technologies by leaders is triggered, in addition to the explanatory factors previously mentioned, by other determinants outlined in the literature, such as in the conceptual model of the research by (Abriane A. & Al., 2021), which includes perceived usefulness and perceived risk of adopting digital tools, financial resources and facilitating conditions for the adoption and use of technologies, as well as social influence and the influence of social networks and the government in times of crisis, such as the Covid-19 pandemic, for example. Given the explanatory factors detailed previously, related to changes in the business environment, competition, customer expectations, and employee behavior, leaders will need to revise their business models to ensure sustainability (Ejbari & Bouali, 2022).

2.4 Characteristics of Digitalization

The characteristics of digitalization can be summarized into four main points: radicalness, disruption, continuity, and complexity (Morakanyane, Grace, & O'Reilly 2017).
Firstly, digitalization is radical, according to Berman (2012), Berman & Marshall (2014), and Westerman & al. (2011), in the sense that it fundamentally changes the way businesses operate and interact with their customers, partners, and suppliers. Traditional processes are often replaced by more efficient digital solutions, which can lead to major changes in corporate culture and work processes.
For Berman (2012), Berman & Marshall (2014), Granados & Gupta (2015), and Fitzgerald & al. (2013), digitalization is disruptive because it often questions established business models and can lead to the disappearance of some market players. Companies must be prepared to quickly adapt to changes in their business environment to remain competitive.
Thirdly, digitalization is continuous because technologies are constantly evolving, and new digital tools are continually being developed. Companies must be able to keep up with the pace of technological change and adjust their strategies accordingly. Loebbeck & Picot (2015), and Janowski (2015).
Finally, digitalization is complex because it often involves interconnected and interdependent digital systems, as well as data from multiple sources. Companies must be able to effectively coordinate the various aspects of digitalization to successfully achieve their goals Janowski (2015), Bharosa et.al. (2013), Matt et al. (2015).
In summary, digitalization is a process that is radically disruptive, continuous, and complex. Companies must be prepared to quickly adapt and overcome the challenges associated with this digital transformation to succeed in today's market (Morakanyane, Grace, & O'Reilly 2017).

2.5 Digitalization's aspects

Digitalization has become a widespread phenomenon in today's business environment, and its effects are felt across many aspects of organizations. Reis & al (2018) identify the aspects of digitalization in three distinct classes.
One key aspect of digitalization is the technological dimension, which involves the use of digital tools and platforms for various business processes, including data collection and analysis, automation, and information management (Fitzgerald &al., 2013). This technological aspect is critical to digital transformation, as it allows organizations to become more agile, efficient, and competitive in their operations.
Another important aspect of digitalization is the organizational dimension, which focuses on the changes that digitalization brings about in business structures, culture, and processes. This

aspect includes the adoption of new management practices, business models, and partnerships, as well as changes in the skills and competencies required of employees (Ross & al., 2016). Effective digitalization requires organizations to not only embrace new technology but also restructure their operations and processes to maximize the potential benefits of digital tools.
Finally, digitalization also has important social implications. As technology continues to transform the way businesses operate, it also impacts the wider society in many ways. This social aspect of digitalization includes changes in consumer behavior and expectations, ethical and privacy concerns, employment and training issues, and other social and environmental impacts (Matt et al., 2015). Organizations must be aware of and address these broader social implications of digitalization to ensure that they are operating in a socially responsible and sustainable manner.
Overall, digitalization encompasses many different aspects, including technological, organizational, and social dimensions. Successful digital transformation requires organizations to address all these aspects in a coordinated and strategic manner to unlock the full potential of digital tools and platforms.

3. The links between digitalization and the firm's financial performance

3.1 The concepts of performance, and financial performance

To explain performance, we will adopt Bourguignon's (2000) definition, as it encompasses the three senses identified above and explicitly recognizes its polysemic nature. Thus, performance can be defined as "the achievement of organizational objectives, regardless of the nature and variety of these objectives. This achievement can be understood in the strict sense (result, outcome) or in the broader sense of the process that leads to the result (action)...." (p.934).
According to (Dohou & Berland, 2010), the performance of a company is a complex and difficult-to-define concept, given the multitude of approaches that exist. It has been widely discussed during recent decades as a categorical imperative. Its complexity arises not only from the diversity of its conceptualizations but also from its multidimensional nature (Issor, 2018).
Schier & Saulquin (2007) state that performance is a notion polarized towards the announced result, but it also conveys a value judgment on the result achieved (positive or negative) and the approach that allowed it to be attained. In the field of management sciences, performance is defined as the achievement of organizational objectives, or even their surpassing.
Therefore, the measurement of organizational performance is a complex process that requires a comprehensive understanding of several factors. Marion & al. (2012) identified four fundamental principles that organizations can utilize to achieve a comprehensive understanding of their performance. The first principle is efficiency, which relates to the company's ability to achieve its objectives by comparing the outcomes to the intended objectives. The second principle is effectiveness, which examines the relationship between the results and the resources employed, using a result indicator and a capital employed measurement. The third principle is coherence, which highlights the agreement between the various organizational components in measuring performance by connecting objectives to means (Ecosip, Cohendet et al., 1995). Finally, relevance, the fourth principle, evaluates the alignment between the objectives or means and the environmental constraints. Together, these four principles provide a comprehensive framework for evaluating organizational performance, enabling organizations to identify areas for improvement and optimize their operations.
Financial performance is an important aspect of overall business performance. It can be defined as the company's ability to generate profits and maximize value for its shareholders. According to Demirgüç-Kunt and Maksimovic (1998), financial performance can be measured using indicators such as return on investment (ROI), profit growth rate, financial leverage ratio, etc.

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3.2 Financial performance measurement

Financial performance is measured by ratios that break down the profitability of invested capital. For a long time, this performance was considered the sole representative of overall business performance. It was believed to reflect the efficiency and effectiveness of the company's use of human, material, and financial resources. This preference for usage is justified by the fact that the selected criteria, which are mainly profitability and leverage, are both means of control and communication with external partners.

Financial performance encompasses an organization's financial well-being, its capacity and inclination to fulfill its long-term financial responsibilities, and its dedication to delivering services in a foreseeable future (Weber, 2008). In a more comprehensive context, financial performance denotes the degree to which financial objectives have been or are being met. It involves assessing the monetary outcomes of a company's policies and actions. Financial performance is generally recognized as a measure of a company's ability to attain its financial objectives (Souames.C,2020).

Therefore, a company is financially performing when the costs of its activities exceed the costs of the resources necessary for their realization. Regarding costs, this performance is measured by quantitative indicators. This financial aspect of performance has long been a reference for business performance and evaluation. Even though it facilitates a simple reading of business management, this financial dimension alone no longer ensures the company's competitiveness (Souames.C,2020).

Financial performance indicators such as profitability rate, return on assets, working capital or cash flow needs, product operating cycle, customer and supplier settlement periods are some of the financial indicators that help analyze the true health of a company. It is also an assessment of financial performance based on ratios to see which variables contribute to financial performance and how to improve them. Performance evaluation tools are all adapted to the concept of financial performance. This new approach will determine the desired return on investment for the shareholder. Total return on investment (ROA) is a crucial measure of an entity's commercial growth. It is a more comprehensive concept than both return on equity (ROE) and return on investment (ROI). A rise in total asset return on investment (ROA) benefits all stakeholders by creating wealth, unlike return on equity (ROE), which only generates returns for shareholders. Furthermore, return on investment (ROI) solely considers shareholders and lenders, neglecting current liabilities. It denotes the return generated by investing a rupee in any of the utilized capital. A decline in total asset return on investment (ROA) should prompt management action. To identify the exact reason for the negative total asset, return on investment (ROA) growth, it is necessary to analyze operating asset yields and non-operating asset yields separately.

Based on various scientific articles, we can define performance as the measure of a company's ability to achieve its short and long-term goals while maximizing its resources and creating value for all its stakeholders. We can also define financial performance as the ability of the company to generate profits, optimize profitability, as well as maximize value for its shareholders by effectively utilizing its financial resources.

This includes measures such as return on investment, profit growth, cost management, financial leverage ratio, and other relevant financial indicators.

However, it is important to note that financial performance should not be considered an end, as it must be balanced with other aspects of company performance, such as customer satisfaction, social responsibility, product, and service quality, etc. Thus, a balanced and sustainable overall performance is the true goal of any performing company.

In conclusion, performance is a key concept in business management. Financial performance is an important aspect of overall company performance, as it reflects the company's ability to

generate profits and maximize value for its shareholders. Financial performance is influenced by several internal and external factors of the company, as well as management decisions made to achieve company objectives. Companies must consider these factors to improve their financial performance and maximize value for their shareholders.

3.3 The impact of digitalization on the financial performance

3.3.1 Digitalization has a positive impact on the financial performance

In the late 1990s, the first studies on the impact of digitalization on companies emerged. These studies explored the relationship between the Internet and a company's operations (Zimmerman & Koerner, 1999). During this period, the concept of digital business was also introduced, highlighting its potential to enhance sales through electronic commerce. Notably, Navas and Breeze's study (1999) was the first to investigate the digitalization of a company's administrative and financial systems (Fernández-Portillo & al., 2022).

Cherkasova, V. A., & Slepushenko, G. A. (2021) conducted a study on 482 Russian companies from 20 industries during the period of 2017-2019. The study concluded that digitalization has a positive impact on the financial performance of firms. Analyzing the effects of digitalization on the operational activities of Russian companies will enable management to make informed decisions on digital transformation strategies, which can improve competitiveness, and efficiency, and contribute to overall development. Nationally, the results of this study could inform decisions on which industries should receive subsidies for digital innovation. The study highlights the profitability gains that can be achieved through digitalization.

In 2020, Mohamad Abou-foul, José L. Ruiz-Alba, & Anabela Soares conducted a study on 185 SME manufacturers in a European context. The study revealed that digitalization has a positive impact on the financial performance of firms. Additionally, the study emphasized the significance of leveraging the firm’s capabilities to enhance the synergy between digitalization and servitization initiatives, which can lead to better financial performance. Participants in the study agreed that prior strategic digital investments in organizational resources, supply chain capabilities, skills, and IoT capabilities were among the most critical factors (Abou-foul, Ruiz-Alba, & Soares 2021).

In an Austrian context, Eller & al. (2020) conducted a study of 193 firms and found that digitalization also positively affects the financial performance of SMEs. This study enhances our understanding of SME digitalization and the resources required for successful transformation. The adoption of IT, employee skills, and a digital strategy are significant drivers of digitalization, which, in turn, positively impacts the financial performance of SMEs. Digitalization is directly and indirectly identified as a crucial factor influencing financial performance via its effects.

According to Zhou & al. (2021), digitalization can serve as a catalyst for improving processes and products, thereby creating value for customers. Furthermore, the adoption of digital technology can enhance personnel productivity, leading to a positive impact on the financial performance of companies.

Several studies have highlighted the positive effects of digitalization on various aspects of business performance. For instance, Martín-Pe˜na & al. (2019) and Mithas & al. (2012) have observed a significant impact of digitalization on revenue growth. Additionally, Kohtam¨aki e& al. (2020) & Mithas et al. (2012) have noted a positive effect of digitalization on cost reduction. Digitalization has also been found to improve international performance, including exports and foreign sales, as suggested by Denicolai & al. (2021). Finally, Wiech & al. (2020) have shown that digitalization positively affects the financial performance.

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3.3.2 Digitization has no impact or negatively affects the financial performance:

It is worth noting that some authors have found that digitalization may not have any impact on the financial performance, or even have a negative impact. For instance, in the Indian bank sector, Sayali Shelar and Dr. Sharad Kumar (2019) observed that digitalization had a negative effect on profitability, which may lead to a decrease in profitability despite growth in advances. This may be due to higher operational costs, including fixed and labor costs. The authors further noted that digitalization negatively affected efficiency as it increased the operating costs of the bank, driven by adaptation pressures, regulatory restrictions, integration costs, resistance to change from society, and complex data architecture (Shelar & Kumar 2019).
DeYoung (2005) systematically analyzed the financial performance of traditional banks in the United States, the effect of digitalization is negative on profitability despite the growth in advances. This may be due to the higher cost of operations, including fixed cost and labor costs. Digital technology has no direct influence on the financial performance, and product innovation mediates the relationship between digital technology and financial performance (Dušica Semenčenko & al. 2020).
Other authors find that the relationship between digitalization and financial performance is not significant (Aral & Weill 2007).

4. Conclusion

According to Kohtamaki & al. (2020), the impact of digitalization on performance can vary based on the industry. However, there is currently inadequate evidence on the performance implications of digitalization for different industries. Zhou & al. (2021) also noted this lack of evidence.
According to Truant, Broccardo, & Dana (2021), firms that are in the early phases of digitization demonstrate lower levels of profitability performance when compared to those in Stages 4 and 5. Nonetheless, digitalization is not the only factor affecting corporate profitability, as other variables such as company listing, sector, size, organizational and managerial systems, sustainability orientation, and disclosure level can also have an impact.
Truant, Broccardo & Dana (2021) also discovered a robust positive correlation between several variables. Company size significantly influences the level of digitalization, which, in turn, affects perceived benefits and business performance. More specifically, as company size expands, the implementation and integration of digital tools improve, leading to a more substantial impact of digitalization on benefits and financial performance. Consequently, company size has an indirect, albeit significant, effect on the financial performance.
From this, we can deduce that digitization can affect a company's performance in several ways. First, you can improve operational efficiency by leveraging your workforce's digital skills. Employees can use digital tools to automate repetitive tasks, communicate faster, and work more effectively remotely. This increases productivity and reduces costs across the company.
Furthermore, Eller & al. (2020) emphasize the importance of employee skills in developing digitalization capabilities and resources. In addition, Kriebel & Debener (2020) cite Kohli and Devaraj (2003), Aral & Weill (2007) to argue that the link between IT investments and performance is clearer when considering capabilities and actual usage. Similarly, Popović-Pantić, Semenčenko, & Vasilić (2020) suggest that the impact of CRM implementation on financial performance depends on various factors, such as the firm's ability to fully utilize the software and add value, much like the use of social media for business purposes.
In addition, digitization can stimulate innovation by enabling companies to develop new products and services, enter new markets, and improve production processes. Digital

technologies such as artificial intelligence, augmented reality, and blockchain offers opportunities to create innovative products and services that meet customer needs.

According to Popović-Pantić, Semenčenko, & Vasilić (2020), Arvanitis & Loukis (2015) found that innovation strengthens the impact of ICT on performance. However, while previous studies like Trantopoulos, von Krogh, Wallin, & Woerter (2017) and Kohli (2013) viewed digital technologies as equally beneficial for innovation, Usai & al. (2021) argue that each type of digital technology has a unique impact on firms' innovation performance.

Digitization can impact business performance through strategic optimization. Businesses can use the data collected through digitization to make more informed decisions and align their strategies with market trends. Digitization also enables a better understanding of customer preferences, helping businesses create more personalized and bespoke offers.

Therefore, businesses that want to thrive in an increasingly digital world must invest in digital innovation and develop digital skills to take advantage of new technologies and the opportunities they offer. Moreover, implementing a coherent digital strategy that aligns with business goals is essential to ensure long-term success.

In summary, digitization is a key success factor for today's enterprises. Companies that can understand and capitalize on the benefits of digitization will be better equipped to remain competitive in the global marketplace and thrive in the future.

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