Annual general meeting (AGM) in the digital era: Where do Italian companies stand?

Sonia Vitali[*]*, Michele Guidi, Marco Giuliani*

Received: 21 November 2023
Accepted: 4 August 2024

Abstract
Digital transformation has emerged as a crucial driver for businesses to thrive in today's dynamic landscape. This process has accelerated due to the widespread impact of the COVID-19 pandemic, compelling companies to reshape their corporate governance structures and mechanisms, including the format of annual general meetings (AGMs). In light of these developments, this study aims to explore how technological, organizational, and environmental factors influence the adoption and implementation of virtual AGMs among companies, using the theoretical lens of the technology-organization-environment (TOE) framework.
To achieve this, the study adopts a qualitative approach to examine the factors underlying the digital transformation of shareholder meetings in Italy. Specifically, the research conducts an inductive content analysis of AGM minutes from Italian companies listed on the FTSE-MIB, covering the years 2019, 2020, 2021, and 2022.
The evidence indicates that virtual AGMs among Italian listed companies are not widespread. During the COVID-19 pandemic, Italian firms avoided conducting virtual AGMs due to technological, organizational, and environmental factors, and most have no immediate plans to implement online meetings. Consequently, the pandemic has not driven AGM innovation in the Italian context. This evidence contributes to the literature on virtual shareholder meetings and provides insights for future research into companies' perspectives on this theme.

Keywords: Annual General Meeting, Virtual Shareholder Meeting, Digital Transformation, Corporate Governance, TOE Framework, Content Analysis.

[*] Università Politecnica delle Marche, Department of Management. Corresponding author: s.vitali@pm.univpm.it.

Management Control (ISSN 2239-0391, ISSNe 2239-4397), 2024, 2 – Special issue
Doi: 10.3280/MACO2024-002-S1008

1. Introduction

The increasing importance of digital transformation has fundamentally altered numerous organizations, introducing novel processes and mechanisms that significantly affect the core structures of business operations (Kraus *et al.*, 2022). This transformation spans various facets, from companies' business models (Matarazzo *et al.*, 2021) to corporate governance practices (Moro Visconti, 2020). For instance, digital platforms are reshaping interactions within corporate governance among various internal and external stakeholders, such as shareholders, managers, employees, banks, customers, and suppliers (Moro Visconti, 2020).

In the Italian context, Paoloni *et al.* (2023) have shown that the COVID-19 pandemic has profoundly impacted Italian small and medium-sized enterprises (SMEs) in terms of adopting new digital technologies. The pandemic and the consequent restrictions compelled companies to review the performance of their routine activities (e.g., the increase in remote work), while also allowing them to re-evaluate their strategies in previously unconsidered directions. In other words, the COVID-19 pandemic has played a catalyzing role in accelerating the digital transformation process (Kraus *et al.*, 2022; Subramaniam *et al.*, 2021), which is evident in the case of annual general meetings (AGMs), a valuable tool for facilitating corporate governance decision-making processes.

During the pandemic, to overcome the impossibility of conducting meetings in person, the activities of the collegial body were digitalized through virtual shareholders' meetings (Obialor and Ayileka, 2020). Globally, virtual shareholders' meetings of listed companies rose from 286 in 2019 to 2.240 in April 2020, with a significant increase in the United States (Freeburn and Ramsay, 2021). In 2020, very few AGMs were held with the physical presence of shareholders (Morrow Sodali, 2020). Large companies such as Ford Motor Company, Timberland, and Goldman Sachs organized their AGMs in a remote format. Consequently, virtual shareholder meetings could become predominant in the future (Brochet *et al.*, 2021). However, the debate on virtual AGMs is not new. For instance, Delaware law has enabled virtual shareholders' meetings since 2000, and Inforte Corporation held its first virtual AGM in 2001, becoming the first company in the world to do so. In China, public firms began conducting online shareholders' meetings in 2005, and all such companies have been holding virtual AGMs since 2017 (Gao *et al.*, 2020; Yao *et al.*, 2022). The increase in virtual AGMs is due to advances in technology and the COVID-19 pandemic, which prompted many companies to switch to an online format to ensure security and accessibility.

Nevertheless, most studies on virtual AGMs focus on analyzing the effects on companies and shareholders (Boros, 2003; Fairfax, 2010; Fontenot, 2017) in terms of shareholder participation (Gao *et al.*, 2020), shareholder questions (Brochet *et al.*, 2021; Schwartz-Ziv, 2021), and "social costs" (Iwasaki, 2020). However, as revealed by Ianniello and Stefanoni (2022), in the Italian context, the use of the internet for voting in meetings (webcasting) is absent, while cases of electronic and postal voting are extremely rare. Thus, research on hybrid or online meetings is highly encouraged, as a significant gap remains in understanding the specific factors that influence the adoption of virtual AGMs in the Italian corporate landscape.

To examine the factors affecting the adoption of virtual AGMs, this study primarily draws upon the technology-organization-environment (TOE) framework (Tornatzky and Fleischer, 1990), which identifies three elements of a company's context that influence innovation adoption: the technological context, the organizational context, and the environmental context (Baker, 2012). The TOE framework has been widely employed for understanding and analyzing how these elements influence the adoption and implementation of new technologies within organizations (Oliveira and Martins, 2011), yet it has been little adopted in corporate governance studies. In all, this study aims to answer the following research question:

RQ: How can technological, organizational, and environmental factors influence the adoption and implementation of virtual Annual General Meetings (AGMs) among companies?

To answer this question, we analyzed 133 minutes of AGMs held in 2019, 2020, 2021, and 2022 from a sample of companies listed on the FTSE-MIB. The study examined these documents using inductive content analysis, a method recommended for situations with limited prior knowledge (Elo and Kyngäs, 2008). The main results show that Italian companies did not adopt virtual shareholder meetings during the years 2019-2022 due to several technological, organizational, and environmental factors.

The research is structured as follows. The next section provides an overview of the main studies on the topic as well as the theoretical framework. Section three illustrates the methodology used in the research. Key results are described in the fourth section. Lastly, sections five and six present a discussion of the results and concluding observations, respectively.

2. Literature review

2.1 Virtual AGM: benefits and challenges

Historically, the relationship between shareholders and managers has been characterized as a pure "agency conflict" (Jensen and Meckling, 1976). The shareholder meeting, or annual general meeting (AGM), helps mitigate this conflict by providing shareholders with insights into the company's financial (and non-financial) performance, as well as managers' decisions and strategies. Furthermore, this gathering offers an opportunity for decision-making on matters beyond the discretion of the board and for dialogue between shareholders and managers. In other words, the AGM serves three main functions: information, decision-making, and acting as a forum (Strätling, 2003).

However, the literature raises concerns about the effectiveness of the AGM in fulfilling these functions (Nili and Shaner, 2022; Kastiel and Nili, 2016). For instance, some argue that the AGM is gradually becoming a "pro forma meeting" rather than a genuine tool for shareholder engagement (Nili and Shaner, 2022). Small shareholders, such as retail investors, exhibit "rational apathy" and are not incentivized to participate in the company's affairs. This leads to distortions in voting outcomes, a reduction in shareholder influence in initiating governance changes, and the creation of deadlock situations (Kastiel and Nili, 2016). A typical problem in public firms' AGMs is the low shareholder participation rate, often due to the widespread ownership structure and the difficulty of physically attending meetings (Gao *et al.*, 2020). Conversely, high levels of participation are positively associated with corporate profitability, as indicated by ROE and ROA ratios (Ianniello and Stefanoni, 2022).

Some scholars argue that virtual AGMs can address issues related to poor shareholder participation at traditional meetings (Boros, 2003; Fairfax, 2010; Fontenot, 2017; Gao *et al.*, 2020; Yao *et al.*, 2022; Van der Krans, 2007). In fact, one of the main advantages of virtual AGMs is the potential increase in shareholder participation (Boros, 2003; Fairfax, 2010; Fontenot, 2017), particularly among non-block investors (Gao *et al.*, 2020; Yao *et al.*, 2022) and corporations with geographically dispersed shareholders (Van der Krans, 2007). For example, empirical research by Gao *et al.* (2020) shows that, in Chinese public companies, shifting from traditional to virtual AGMs significantly increased minority shareholder participation by approximately 35%. This led to positive stock returns and improvements in corporate governance, such as reductions in tunneling activities (Gao *et al.*, 2020; Wang and Wang, 2021) and earnings manipulation (Wang and Wang, 2021). Additionally,

small investors, by voting online on environmental issues, can enhance corporate environmental performance by drawing attention from influential groups such as the media and analysts, thereby impacting management's decisions (Yao *et al.*, 2022). Another benefit of virtual AGMs is the reduction in costs for shareholders and the removal of geographical and physical barriers to participation (Freeburn and Ramsay, 2021). Online meetings eliminate travel time and expenses, benefiting retail shareholders and those holding shares in multiple companies (Fontenot, 2017). Retail investors often cannot attend meetings due to their timing during working hours and their distance from shareholders' homes (Boros, 2003). However, holding a virtual AGM does not significantly influence shareholder participation when the meeting site is easily accessible and the cost of attending is low (Gao *et al.*, 2020). For instance, high-speed rail access to a company's headquarters influences small shareholders' participation in AGMs (Wang and Wang, 2021). Increased accessibility through virtual AGMs leads to greater shareholder involvement (Freeburn and Ramsay, 2021). Modern technologies improve interactions during virtual meetings (e.g., through dashboard tools) and transparency (e.g., through recordings available on websites), thus enhancing shareholder democracy (Nili and Shaner, 2022). For example, the application of blockchain and smart contracting can overcome issues related to transparency, verification, and identification, while reducing shareholder voting costs and organizational costs for companies, thereby enhancing the AGM's forum function (Lafarre and Van der Elst, 2018). Holding a virtual AGM also enhances an organization's brand by portraying a technologically advanced image (Fairfax, 2010; Fontenot, 2017), a benefit that extends beyond the technology sector (Fairfax, 2010). Improved relationships and dialogue with shareholders during and after the meeting, as well as an enhanced corporate governance image, are additional advantages (Abdennadher and Cheffi, 2020). The virtual AGM could also be an appealing tool for the next generation of shareholders (i.e., millennials) who are technologically savvy (Nili and Shaner, 2022). Lastly, another benefit of holding a virtual AGM is cost savings for organizations (Abdennadher and Cheffi, 2020; Freeburn and Ramsay, 2021). Companies can reduce meeting costs by approximately 50% through the use of technological tools, avoiding expenses related to booking venues, catering, security, and medical personnel (Fontenot, 2017). For example, the AGM costs for Inforte Corporation, the first company to conduct an AGM virtually, dropped from $20,000 for a physical meeting to $2,000 for a virtual format (Fairfax, 2010).

Despite these benefits, virtual AGMs present concerns for both shareholders and organizations. A survey of investors, non-investors, academics,

and non-profits from global markets revealed that the main concerns are related to the inability to ask live questions during meetings, the absence of an option to submit questions in advance, and the fact that questions submitted are sometimes not answered (Belyeu *et al.*, 2021). Companies could manipulate uncomfortable questions, for instance by filtering or ignoring them, effectively allowing management to "cherry-pick" questions (Freeburn and Ramsay, 2021). On the other hand, the online format may make shareholders feel less inhibited when posing disruptive questions, making it difficult for management to respond (Fairfax, 2010). The virtual AGM could undermine the traditional face-to-face accountability of management (Boros, 2003), the interaction between shareholders and management, and among shareholders themselves (Fairfax, 2010; Nili and Shaner, 2022), as well as shareholders' ability to influence voters and management (Fairfax, 2010). These concerns are most pronounced in meetings where questions are submitted via email (Fairfax, 2010), and for retail shareholders who can only engage with directors at the AGM (Fontenot, 2017; Freeburn and Ramsay, 2021). Empirical analyses by Brochet *et al.* (2021) and Schwartz-Ziv (2021) show that virtual shareholder meetings are shorter than physical ones. Virtual meetings are 17% shorter, leading to a 16% reduction in shareholder questions (Schwartz-Ziv, 2021). However, shorter AGMs could be viewed either as a limitation of shareholders' voices (Schwartz-Ziv, 2021) or as an efficient compliance exercise that allows shareholders to communicate quickly and cost-effectively (Brochet *et al.*, 2021; Van der Krans, 2007).

Although virtual AGMs reduce costs for both investors and companies, they could lead to "social costs" linked to the value of "implicit communication, such as management's choice of words, tone of voice, and body language, which provide valuable information about the company. This value is likely high for shareholders, so if virtual meetings cannot capture it, they may be socially undesirable (Iwasaki, 2020). However, Iwasaki (2020) suggests several actions to mitigate the loss of "implicit communication" inherent in virtual meetings, such as conducting meetings via video rather than audio only, allowing shareholders to ask live and in real-time questions, and maintaining a record of shareholder actions. The greatest concern for managers involves the technical and legal issues of technological instruments, which could lead to disputes between shareholders and organizations and, consequently, the cancellation of meetings (Abdennadher and Cheffi, 2020).

In summary, "whether virtual meetings become the saving grace of shareholder democracy and stakeholder governance, or sink like the Titanic, will depend on the details" (Nili and Shaner, 2022, p. 194).

2.2 Theoretical framework

Our research relies on the theoretical framework developed by Tornatzky and Fleischer (1990), known as the "Technology-Organization-Environment (TOE)" framework, which is graphically represented in Fig. 1. This framework aims to identify the key organizational factors that drive companies to adopt new technologies and pursue technological innovation. Unlike other widely adopted theories that explain the technology adoption process in companies, such as the Technology Acceptance Model (TAM), the TOE model takes a more holistic approach and is better suited for addressing corporate governance issues (So *et al.*, 2021). The TOE framework is instrumental in identifying and mitigating risks that could lead to the failure of adoption projects (Stjepić *et al.*, 2021). This model distinguishes three key elements that influence organizational adoption of innovation: technology, organization, and environment. Thus, it focuses not on the nature of innovation decision-making itself but on the contextual factors that affect it (Krieger *et al.*, 2021). Many studies have applied this model to explain technology adoption in various areas, such as accounting (Akter *et al.*, 2024; So *et al.*, 2021; Seshadrinathan and Chandra, 2021), auditing (Krieger *et al.*, 2021; Widuri *et al.*, 2019), and across multiple industries, including the banking sector (Bany Mohammad *et al.*, 2022), as well as different types of companies, such as SMEs (Olutoyin and Flowerday, 2016; Stjepić *et al.*, 2021), and in the context of sustainable smart city studies (Ullah *et al.*, 2021). Moreover, as demonstrated by numerous previous studies, this framework is well-suited to explain the adoption of various types of technologies, such as blockchain (Akter *et al.*, 2024), business intelligence systems (Puklavec *et al.*, 2018), cloud computing (Borgman *et al.*, 2013), and data analytics (Kiu and Chan, 2024).

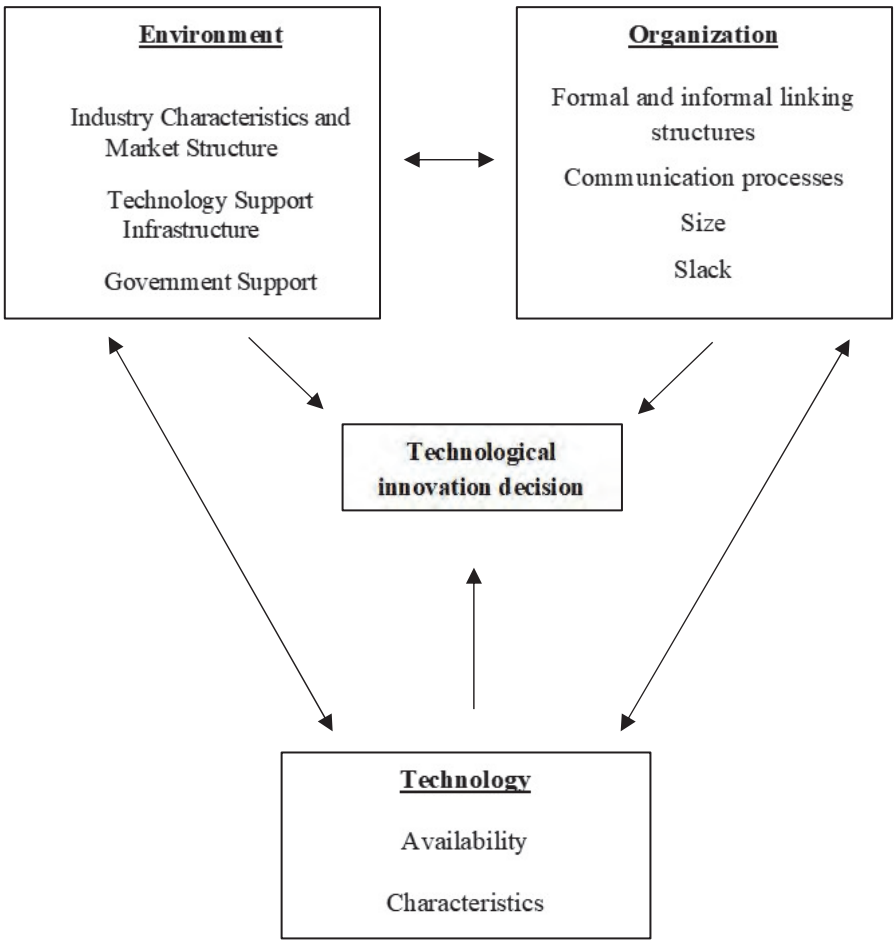
The technological context encompasses both internal and external technologies relevant to the firm, including the firm's existing practices and equipment, as well as the range of available technologies outside the firm (Oliveira *et al.*, 2011). For instance, the availability and characteristics of technology can affect the adoption of technological innovations (Puklavec *et al.*, 2018).

The organizational context relates to the resources and characteristics of the firm (Seshadrinathan and Chandra, 2021), such as employee structures, intra-firm communication processes, firm size, and the amount of slack resources (Baker, 2012). For example, the presence of informal linking agents – such as product champions, boundary spanners, and gatekeepers – is associated with adoption. Communication processes from top management can foster innovation by creating a supportive organizational environment that embraces change and aligns with the firm's core mission and vision (Baker, 2012). Larger organizations, due to economies of scale, are more likely to adopt technologies

(Kiu and Chan, 2024), while slack resources, though desirable and helpful, may not necessarily lead to technological innovation (Baker, 2012).

Lastly, the environmental context refers to the arena in which a company conducts its business and includes aspects such as industry conditions, the presence or absence of technology service providers, and the regulatory environment. Intense competition, firms in rapidly growing industries, and the availability of skilled labor, consultants, or suppliers of technology services can foster innovation. Conversely, government regulation can either support or hinder innovation (Baker, 2012).

Figure 1 - TOE Framework (Adapted from Tornatzky and Fleischer, 1990)



The literature suggests that these specific factors identified within the TOE framework can vary across different study contexts (Aoun *et al.*, 2011) and types of organizations (Akter *et al.*, 2024). In other words, this framework is flexible and allows for the extension and inclusion of additional categories and factors (Dehghani *et al.*, 2022). For instance, in the technological context, additional factors could include technology cost-benefit analysis, technology compatibility and complexity (Rosli *et al.*, 2013), as well as relative advantage (Seshadrinathan and Chandra, 2021). In the organizational context, factors such as the CEO's knowledge and innovativeness (Ghobakhloo *et al.*, 2011) and human resource IT competency (Baiod and Hussain, 2024) have emerged. Lastly, in the environmental context, previous studies have identified factors such as the perceived level of professional body support (Siew *et al.*, 2020), outsourcing support, third-party support (Puklavec *et al.*, 2018), user satisfaction, and organizational performance (Aoun *et al.*, 2011). Figure 1 illustrates the elements of the TOE framework.

3. Research method

3.1 AGM in Italy: a brief overview

Italian law primarily assigns to the AGMs of listed companies the following powers: 1. approving the financial statements and non-financial statements; 2. appointing and dismissing directors, appointing statutory auditors and the chairman of the board of statutory auditors, and, when required, the auditor; 3. determining the remuneration of directors and statutory auditors; 4. discharging the responsibilities of the CEO and the board of directors. Shareholders entitled to vote may attend the meeting. Their statements on agenda items, as well as the resolutions passed at the shareholders' meeting, are recorded in a specific document, the minutes. Italian law stipulates that this document must be prepared without delay, within the time necessary to comply with filing or publication obligations and must be made available on the company's website within thirty days of the meeting date. Additionally, the regulations allow shareholders to submit questions on agenda items before the meeting, which the company should answer prior to the AGM (hereinafter referred to as "pre-AGM questions"). These questions and the company's responses are always included in the appendices of the minutes, which also contain other information, such as the identity of the participants and the capital represented by each, the voting procedures and results, and the identification of shareholders who voted in favor, abstained, or dissented.

In Italy, the conduct of shareholders' meetings via remote communication has been permitted since 2003. Article 2370 of the Civil Code states that corporate by-laws may allow shareholder meetings to be attended through telecommunications or votes to be cast by correspondence or electronic means. Due to the Covid-19 pandemic, the Italian legislator, through the "Cura Italia Decree" (Article 106), established that companies could hold shareholders' meetings via telecommunications, even in deviation from the by-laws' provisions. This Decree also provided that participation in the general meeting could occur exclusively through a designated representative. Furthermore, the subsequent Decree (the so-called "Mille Proroghe Decree") extended the provisions of Article 106 of the "Cura Italia Decree" until July 31, 2022.

3.2 Research protocol

To address the research purpose, the authors analyzed the minutes and annexes of AGMs of Italian companies held in 2019, 2020, 2021, and 2022. Specifically, the sample comprises the 40 companies listed on the FTSE-MIB index. Although the data is publicly available, pseudonyms (C + nn, with "nn" representing a random number from 01 to 33) have been used instead of actual company names to maintain confidentiality.

The choice of this sample is justified for two reasons. Firstly, as previously mentioned, Italian companies were compelled to alter their meeting formats in 2020 due to the Covid-19 pandemic. Secondly, the FTSE-MIB is the primary index of Borsa Italiana and includes the shares of the 40 Italian companies with the highest market capitalization. These companies, due to their size, are generally more inclined to adopt technological innovations (Baker, 2012). Moreover, these firms frequently attract considerable attention from institutional investors and activists because of their significant market impact (Barko *et al.*, 2022). Thus, the participation behaviors of large shareholders significantly influence managerial decisions and firm outcomes, underscoring the need for reliable tools to facilitate this engagement (Zhang *et al.*, 2018). This suggests that large-cap companies may benefit from advanced technological solutions to support shareholder participation and address associated challenges in AGMs.

The AGM minutes for the years 2019, 2020, 2021, and 2022, corresponding to the financial statements of 2018, 2019, 2020, and 2021, were sourced from the websites of the selected companies. In total, the authors collected 133 minutes out of 160 AGMs held in the sample. The exclusion of 27 minutes was due to one company's 2019 meeting minutes not being available on its website, and twenty-six minutes, across different years, did not include

any questions. These omissions are attributed to the fact that these companies are based in foreign countries where the inclusion of questions in AGM minutes is not mandatory. Despite being listed on the Italian market, these companies hold their AGMs outside Italy. Table 1 illustrates the sample considered.

Table 1 – Sample considered

	2019	**2020**	**2021**	**2022**
Initial sample	40 companies	40 companies	40 companies	40 companies
-Minutes not available	- 1 company			
-Company without headquarter in Italy	- 6 companies	-6 companies	-7 companies	-7 companies
AGMs minutes examined	= 33 minutes	=34 minutes	=33 minutes	=33 minutes

Source: authors' own elaboration

Researchers examined shareholders' questions and companies' responses using inductive content analysis, a method recommended for situations with limited prior knowledge (Elo and Kyngäs, 2008). One researcher identified questions from the AGM minutes, a process with minimal risk of errors due to its routine nature. A second researcher verified the accuracy through a sample check and found no errors. During the coding process, key concepts such as "virtual AGM," "telecommunications," and "electronic meeting" were assigned.

To ensure the accurate translation of the Italian AGM minutes, cross-checking via back-translation was employed (Maneesriwongul, 2004). One researcher translated the document, and another translated it back, comparing it with the original to identify inconsistencies.

The study's credibility was ensured through investigator triangulation (Patton, 2002), with multiple researchers independently analyzing the data. Transferability was achieved by detailing the sampling strategy for selecting Italian listed companies, particularly those from the FTSE-MIB index (Amin *et al.*, 2020). Dependability was supported by an audit trail documenting research decision (Eryılmaz, 2022). Confirmability was enhanced through peer debriefing, where colleagues reviewed interpretations to minimize bias (Rose and Johnson, 2020).

The adoption of these strategies ensured the credibility, transferability, dependability, and confirmability of the study. These characteristics are considered pillars of trustworthiness, crucial in establishing the reliability and validity of qualitative research (Anney, 2014; Guba, 1981; Guba and Lincoln, 1982; Schwandt *et al.*, 2007).

4. Results

From the analysis of the AGM minutes, it emerged that virtual AGMs are not common in Italy. Although Italian legislation allowed AGMs to be conducted via communications even before the pandemic, all FTSE-MIB listed companies held physical shareholders' meetings in 2019. Analysis of the 2019 AGM minutes revealed limited interest from shareholders regarding the topic of virtual AGMs. Only one question, presented in the AGMs of five different companies, indirectly addressed the issue by inquiring about initiatives to increase shareholder participation in the meetings:

"What initiatives were undertaken in 2018 to encourage the widest possible shareholder participation in the meetings and to facilitate the exercise of shareholders' rights?" (C22, 2019 AGM)

The onset of Covid-19 and the subsequent mobility restrictions made traditional AGMs impossible, forcing companies to alter their meeting formats. However, during the AGMs of 2020, 2021, and 2022, Italian companies permitted shareholder participation exclusively through designated representatives, despite the "Cura Italia Decree" allowing remote attendance. Italian companies opted to allow participation via communication only for specific individuals, such as board members, supervisory board members, auditors, and designated representatives. A few companies, such as company C28, permitted shareholders to follow the meeting through a passive streaming platform without allowing them to intervene or vote remotely. An exception occurred in the 2022 AGM: company C21 returned to a physical shareholders' meeting in October, when the temporary decree was no longer in effect.

Regarding AGM formats, some shareholders questioned companies about the reasons for not conducting virtual meetings during the Covid-19 pandemic. Examples of shareholder questions include:

"Parliamentary sessions, congresses, and university lectures will be held by electronic means; why do the assemblies of listed companies not? Why didn't you hold virtual shareholders' meetings on the Internet platform?" (C01, 2020 AGM)

"Has the board considered the possibility of using telecommunications for conducting the shareholders' meeting, given its importance in policy engagement? If so, what are the reasons for not Doing so?" (C03, 2022 AGM)

Despite varied responses, the main findings indicate that Italian companies are generally skeptical about virtual meetings, primarily due to technological concerns. These factors appear to be significant barriers to the modernization of AGMs. Italian companies deemed AGMs conducted through designated representatives as the most appropriate format during the emergency period. This preference was driven by the inability to hold physical meetings and the perceived inadequacy of available technologies for virtual meetings. For instance, company C05 described shareholder participation through a designated representative as:

"… the most efficient solution for properly conducting the meeting proceedings regarding participant identification and establishing quorums; and for improving shareholder protection" (C05, 2021 AGM)

Additionally, company C13 explained that the decision to use designated representatives rather than virtual meetings was influenced by the lack of reliable technological tools to ensure accurate shareholder identification, participation, and voting rights. This sentiment was echoed by other companies. For instance, company C18 illustrated that the selection of a designated representative was due to the following reasons:

"… the absence of infrastructure capable of effectively supporting real-time remote participation and the ongoing uncertainty about recognizing actual participants" (C18, 2021 AGM)

Many companies (e.g., C09, C19, C23) perceive remote shareholder participation as fraught with risks, including operational and IT-related concerns, challenges with shareholder identification, and technical glitches. These issues could hinder shareholders' ability to exercise their rights and potentially disrupt the meetings. Companies such as C02 and C21 stated that conducting a virtual AGM would present significant challenges, especially in ensuring accurate identification of remote participants and managing potential interruptions or disruptions of online platforms.

In addition to these concerns, some companies highlighted obstacles related to the costly organization of virtual AGMs and the risk of cyber-attacks. For instance, company C22 expressed worries about potential interruptions of telematic links or cyber-attacks during AGMs, noting these risks are amplified with a large number of shareholders, mentioning a total of 610,000 shareholders. Furthermore, company C20 discussed the expenses and time required for remote participation, emphasizing the significant costs and time commitments, particularly given the current lack of necessary IT tools.

During meetings held between 2019 and 2022, a shareholder questioned several companies about the future possibility of conducting virtual meetings (e.g., "Are you going to hold shareholder meetings also via the Internet?"). In response, some companies stated that their corporate by-laws do not currently permit virtual meetings. While some companies (e.g., C07, C08, C14, C19) indicated no immediate plans to amend their by-laws, others mentioned they might consider amendments in the future if circumstances allow for virtual meetings. For example, company C06 noted it would consider virtual AGMs after a thorough cost-benefit analysis. Conversely, other organizations (e.g., C09, C18, C22, C23) declared that their corporate by-laws already permit shareholder meetings via communications. However, due to the aforementioned barriers and risks, they did not conduct online meetings in 2020, 2021, and 2022 and will reassess such formats in the future based on technological advancements and cost-benefit analyses. For example, C23 stated:

"… at present, this solution is not viable due to the complexity and costs still associated with its implementation. Nonetheless, the Bank intends to keep this possibility open for future developments, particularly technological advancements, which should be carefully evaluated, taking into account benefits, complexity, and costs" (C23, 2020 AGM)

An overview of the key results discussed in this section is presented in Table 2, which provides a concise summary of AGM formats, shareholder questions and concerns, and the companies' responses from 2019 to 2022.

Table 2 – Results overview

Year	Format of AGMs	Shareholder Questions/Concerns	Companies' Responses
2019	Physical AGMs	Limited interest in virtual AGMs	Focus on increasing shareholder participation in physical AGMs
2020	Designated representative	Questions on why virtual AGMs were not used	Technological and operational barriers were predominantly cited
2021	Designated representative	Continued questioning on the use of telecommunications for AGMs	Highlighted lack of reliable technology for virtual AGMs
2022	Designated representative (few exception)	Future possibility of virtual AGMs; technological barriers	Some companies open to future virtual AGMs depending on technological advancements and cost-benefit analyses

5. Discussion

In 2019, all Italian companies held traditional shareholders' meetings. The advent of the Covid-19 pandemic forced companies to reconsider their meeting formats. Consequently, Italian companies listed on the FTSE-MIB decided to conduct AGMs in 2020, 2021, and 2022 via designated representatives, despite the legislative option for virtual-only meetings. Specifically, these AGMs allowed participation only for specific individuals (such as board members, supervisory boards, auditors, and notaries) via communications, while shareholders could attend only through designated representatives. Despite digital transformation reshaping entire sectors and daily business activities (Kraus *et al.*, 2022), Italian companies did not adopt technological solutions for AGMs, even during the pandemic. In other words, the pandemic did not drive the digital transformation of AGMs (Culasso *et al.*, 2022).

To address the research question, we analyzed how technological, organizational, and environmental factors influence the adoption and implementation of virtual AGMs among companies.

Regarding technological factors, Italian companies often cite technical barriers when discussing virtual AGMs, including issues related to technology availability, characteristics (Baker, 2012), and complexities (Rosli *et al.*, 2013) related to shareholder identification and technical glitches. Previous studies suggest that blockchain technology could address these barriers, as "in a blockchain system, shareholders can be identified using their wallet's digital identity or proof of authentication stored outside the blockchain" (Lafarre and Van der Elst, 2018, p. 16). Additionally, concerning the risks of interruptions and inefficiencies due to large shareholder numbers, Italian listed companies have fewer shareholders compared to major American companies where virtual AGMs are more prevalent. For instance, companies like Ford Motor Company, Timberland, and Goldman Sachs organize remote AGMs. Recently, Banco Santander, a leading Spanish credit institution, partnered with Broadridge, a virtual AGM platform provider, to implement blockchain technology in AGMs. In summary, it appears that organizations were less inclined to innovate AGM formats due to (perceived) technology availability and characteristics. Moreover, the cost-benefit analysis of technology, where perceived benefits outweigh adoption costs (Rosli *et al.*, 2013), could deter AGM innovation during the Covid-19 pandemic. The findings suggest that Italian companies may not fully grasp the benefits associated with virtual AGMs, such as cost savings (Abdennadher and Cheffi, 2020; Fontenot, 2017; Freeburn and Ramsay, 2021; Lafarre and Van der Elst, 2018) or increased shareholder engagement (Freeburn and Ramsay, 2021).

Moreover, improvements in technological branding (Fairfax, 2010; Fontenot, 2017) or AGM transparency (Nili and Shaner, 2022) are advantages not achieved by Italian companies. Furthermore, companies were not fully aware of the "non-financial/economic costs" associated with their chosen format. Shareholders' meetings via designated representatives did not fulfill the roles of traditional AGMs (Strätling, 2003), achieving only decision-making rather than information exchange and a forum. Additionally, the AGM format via designated representatives eliminated traditional face-to-face accountability (Boros, 2003; Freeburn and Ramsay, 2021; Nili and Shaner, 2022), preventing shareholders from participating in meetings and engaging with boards or other shareholders (Fairfax, 2010; Nili and Shaner, 2022; Freeburn and Ramsay, 2021). This loss of interaction, typical of AGMs (both physical and specific virtual types), could potentially limit shareholder voices (Schwartz-Ziv, 2021). It should be noted that the Italian AGM format during the emergency period did not enable shareholders to assess company value through non-verbal communication from managers (Iwasaki, 2020). In other words, these shareholder meetings incurred "social costs" due to "implicit communication gaps": investors could not discern values conveyed through non-verbal elements like tone, choice of words, and body language from management (Iwasaki, 2020). In sum, organizations conducted a cost-benefit analysis where not all benefits of virtual AGMs and not all costs of AGMs through representatives were taken into consideration.

Regarding organizational factors, the size of companies does not seem to have significantly influenced the adoption of virtual AGMs. Despite their larger size and higher market capitalization, which typically suggests a greater inclination towards innovation (Kiu and Chan, 2024), these companies did not embrace virtual AGMs. This reluctance may stem from conservative communication processes among directors who were skeptical of new technologies, hindering innovation in this area. Moreover, the absence of informal linking agents – shareholders interested in promoting remote AGMs – might have played a pivotal role in the lack of digital transformation of traditional shareholder meetings. These agents could act as catalysts within the organization, advocating for technological advances that enhance shareholder engagement and operational efficiency through virtual meetings. Their influence could prove instrumental in overcoming organizational inertia and fostering a more progressive stance towards adopting modern meeting practices. Essentially, while traditional organizational size may not directly facilitate virtual AGM adoption, the proactive involvement of informal linking agents offers a promising path for navigating technological barriers and guiding companies toward embracing digital innovations in corporate governance.

Concerning environmental factors, the lack of government regulations (Baker, 2012) specifying virtual shareholders' meetings, including cyber-risk occurrences or voting interruptions, might have discouraged companies from conducting virtual AGMs. Italian norms only allow virtual AGMs but do not specify the effects of potential difficulties or interruptions during virtual AGMs. For example, company C04 stated, "the media can be used to conduct when the effects of any difficulties or interruptions of the telematic link on the development and validity of the assembly will be chaired" (C04, 2022 AGM). Hence, regulatory updates could be crucial to encouraging organizations towards AGM digitalization. In fact, compliance with regulations is another concept emerging from the analysis of minutes. Several companies emphasized that they acted "law compliant", and some highlighted that future AGM formats would depend on regulatory developments ("for the future, C10 will comply with regulatory developments in the holding of shareholders meetings"; C10, 2022 AGM). Simultaneously, the lack of adequate technological support infrastructure poses a formidable obstacle to adopting virtual shareholders' meetings, significantly contributing to the non-adoption of virtual AGMs in Italy. This technological infrastructure gap encompasses aspects such as broadband access, reliable video conferencing platforms, and cybersecurity measures, which have hindered Italian companies' readiness to effectively transition to virtual AGMs. Conversely, industry characteristics and market structure did not noticeably influence the adoption of virtual AGMs among the sample companies. Despite operating across diverse industries and facing varying dynamics in market structures and shareholder pressures, these factors did not correlate with different levels of technology adoption for conducting AGMs. This suggests that industry-specific conditions and market competitiveness did not decisively motivate or hinder companies from embracing virtual meeting technologies for shareholder engagement.

In conclusion, the Covid-19 pandemic presented a significant opportunity for major Italian companies to advance towards digitalizing shareholder meetings. They could have experimented with virtual AGMs during this period to realize all the associated benefits, such as enhancing corporate governance and the AGM forum, as the mentioned barriers could be overcome with modern technologies. Additionally, as noted by Nili and Shaner (2022), achieving the benefits of virtual meetings depends on specifics, such as conducting virtual AGMs with video to avoid drawbacks and issues identified in previous studies (Fairfax, 2010; Freeburn and Ramsay, 2021; Iwasaki, 2020; Nili and Shaner, 2022). For the Italian context, where traditional AGMs prevail and remote AGMs are not widespread, the implementation of hybrid shareholders' meetings could be a significant starting point for these companies towards modernizing AGMs.

6. Conclusions

This study aims to examine how technological, organizational, and environmental factors influence the adoption and implementation of virtual Annual General Meetings (AGMs) among companies. To achieve this objective, the minutes of AGMs from Italian-listed companies held between 2019 and 2022 were analyzed using inductive content analysis. The main results of this study are summarized in Table 3, which illustrates the TOE (Technology, Organization, Environment) factors influencing the adoption of virtual AGMs among the investigated firms.

Table 3 – TOE factors influencing virtual AGMs

Context	Factor	Influence
Technological	Availability of appropriate technologies	The lack of secure and robust platforms for virtual meetings was a major barrier.
	Characteristics and complexities of technologies	Technological characteristics such as ease of use, reliability, and the ability to ensure accurate shareholder identification and participation were critical. Complexities in using new technologies deterred companies from adopting virtual AGMs.
	Cost-benefit analysis of technology adoption	Organizations conducted a cost-benefit analysis where not all benefits of virtual AGMs and not all costs of AGMs through representatives were taken into consideration. High perceived costs and low perceived benefits led to resistance in adopting new technologies.
Organizational	Formal and informal linking structures	The presence or absence of formal structures (like dedicated teams or roles) and informal structures (such as internal champions or advocates for technology) within the organization influenced the adoption of virtual AGMs.
	Communication processes	Effective communication processes, particularly top-down communication from management, fostered a supportive environment for adopting new technologies. Poor communication hindered innovation.
Environmental	Availability of technology support infrastructure	The availability of external support, such as reliable internet infrastructure and cybersecurity measures, influenced the adoption of virtual AGMs. Inadequate infrastructure was a significant barrier.
	Government regulation and support	The lack of clear regulations or supportive policies for virtual AGMs discouraged companies from adopting them. Regulatory support could have provided the necessary push for technological adoption.

Overall, the study suggests that while the Covid-19 pandemic presented a compelling opportunity for major Italian companies to transition to digital shareholder meetings, it did not catalyze significant digital transformation within the Italian corporate landscape. Consequently, the adoption of virtual formats for annual shareholder meetings in Italy does not appear imminent, and the path toward digitalizing AGMs seems lengthy.

This research contributes theoretically by enriching the body of studies on shareholder meetings, which remains relatively underexplored in economic and business research (Strätling, 2003). Additionally, academic research on information technology and systems (IS) in corporate governance, or e-corporate governance, is limited (Abdennadher and Cheffi, 2020). Empirical studies on virtual meetings are scarce, with most focusing on the impact of remote AGMs on shareholder participation (Gao *et al.*, 2020). To the best of the authors' knowledge, this is the first empirical analysis to examine the technological, organizational, and environmental factors influencing the adoption of virtual shareholder meetings. This study thus contributes to expanding the knowledge of the TOE (Technology, Organization, Environment) framework by applying it within a corporate governance context.

In terms of practical implications, the study identifies key technological, organizational, and environmental factors that companies and policymakers should consider when innovating shareholder meetings. For example, from a regulatory perspective, the research suggests considerations for conducting AGMs in emergency contexts and rethinking conventional meeting practices.

However, certain limitations should be noted. Firstly, the sample is restricted to companies listed on the FTSE-MIB, excluding other stock indices and non-listed firms. The FTSE-MIB, as the primary index of Borsa Italiana, includes the 40 Italian companies with the highest market capitalization. These companies are more likely to adopt technological innovations (Baker, 2012) and attract significant attention from institutional investors and activists due to their market impact (Barko *et al.*, 2022). Large shareholders' participation behaviors significantly influence managerial decisions and firm outcomes, necessitating reliable tools to enhance engagement (Zhang *et al.*, 2018). In contrast, SMEs may face different challenges in holding AGMs due to fewer shareholders. Thus, FTSE-MIB companies are considered the most representative for exploring this research topic, according to the authors. Secondly, a methodological limitation involves the manual identification of AGM-related questions by a researcher, which could introduce professional bias. Nonetheless, as detailed in the methodology section, a second researcher performed random sampling, confirming the accuracy of the results.

Future research could expand the sample to include companies in the technology sector, where early adopters of virtual meetings are often found (Fontenot, 2017). This inclusion could provide insights into differences in innovation adoption between tech companies and others. Further investigation could also explore companies' perspectives on virtual AGMs through surveys or semi-structured interviews. Finally, additional studies examining the relationship between technology adoption and technological, organizational, and environmental factors could yield valuable insights.

References

Abdennadher S., Cheffi W. (2020), The effectiveness of e-corporate governance: an exploratory study of internet voting at shareholders' annual meetings in France, *Corporate Governance: The International Journal of Business in Society*, 20(4), pp. 673-702. Doi: 10.1108/CG-04-2019-0116.

Akter M., Kummer T.F., Yigitbasioglu O. (2024), Looking beyond the hype: The challenges of blockchain adoption in accounting, *International Journal of Accounting Information Systems*, *53*. Doi: 10.1016/j.accinf.2024.100681.

Amin M.E.K., Nørgaard L.S., Cavaco A.M., Witry M.J., Hillman L., Cernasev A., Desselle S.P. (2020), Establishing trustworthiness and authenticity in qualitative pharmacy research, *Research in social and administrative pharmacy*, 16(10), pp. 1472-1482.

Anney V.N. (2014), Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria, *Journal of emerging trends in educational research and policy studies*, 5(2), pp. 272-281.

Aoun C., Vatanasakdakul S., Chen Y. (2011), IT governance framework adoption: Establishing success factors. In *Governance and Sustainability in Information Systems. Managing the Transfer and Diffusion of IT: IFIP WG 8.6 International Working Conference, Hamburg, Germany, September 22-24, 2011. Proceedings* (pp. 239-248), Springer Berlin Heidelberg.

Apostolides N. (2010), Exercising corporate governance at the annual general meeting, *Corporate Governance: The International Journal of Business in Society*, 10(2), pp. 140-149. Doi: 10.1108/14720701011035666.

Baker J. (2012), The Technology – Organization – Environment Framework. Doi: 10.1007/978-1-4419-6108-2_12.

Baiod W., Hussain M.M. (2024), The impact and adoption of emerging technologies on accounting: perceptions of Canadian companies, *International Journal of Accounting & Information Management*.

Bany Mohammad A., Al-Okaily M., Al-Majali M., Masa'deh R.E. (2022), Business intelligence and analytics (BIA) usage in the banking industry sector: an application of the TOE framework, *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(4), 189.

Barko T., Cremers M., Renneboog L. (2022), Shareholder engagement on environmental, social, and governance performance, *Journal of Business Ethics*, 180(2), pp. 777-812.

Belyeu K., Lloyd C., Ramming A., Riggs S. (2021), *2021 Global Benchmark Policy Survey*, Institutional Shareholder Services.

Borgman H. P., Bahli B., Heier H., Schewski F. (2013), Cloudrise: Exploring cloud computing adoption and governance with the TOE framework, *Proceedings of the Annual Hawaii International Conference on System Sciences*. Doi: 10.1109/HICSS.2013.132.

Boros E. (2003), Virtual shareholder meetings, *Duke L. & Tech. Rev.*, 3, 1.

Brochet F., Chychyla R., Ferri F. (2021), Virtual shareholder meetings, *University of Miami Legal Studies Research Paper*, 3743064. Doi: 10.2139/ssrn.3743064

Bryan J.D., & Zuva T. (2021), A review on TAM and TOE framework progression and how these models integrate, *Advances in Science, Technology and Engineering Systems Journal*, *6*(3), 137-145.

Culasso F., Giacosa E., Giordino D., Crocco E. (2022), Digital transformation: Is COVID-19 a catalyst for micro and small enterprises first steps toward innovation?, *Management Control*, 2, pp. 71-94. Doi: 10.3280/maco2022-002-s1004.

Dehghani M., William Kennedy R., Mashatan A., Rese A., & Karavidas D. (2022), High interest, low adoption. A mixed-method investigation into the factors influencing organisational adoption of blockchain technology, *Journal of Business Research*, *149*. Doi: 10.1016/j.jbusres.2022.05.015.

Elo S., Kyngäs H. (2008), The qualitative content analysis process, *Journal of advanced nursing*, 62(1), pp. 107-115.

Eryılmaz Ö. (2022), Are dissertations trustworthy enough? The case of Turkish ph. d. dissertations on social studies education, *Participatory Educational Research*, 9(3), pp. 344-361.

Fairfax L.M. (2010), Virtual shareholder meetings reconsidered. *Seton Hall L. Rev.*, 40, 1367.

Fontenot L.A. (2017), Public company virtual-only annual meetings, *Business Lawyer*, 73, 35.

Freeburn L., Ramsay I. (2021), Virtual Shareholder Meetings in Australia. *International Company and Commercial Law Review*, 32(2), pp. 53-79. Available at SSRN. Doi: 10.2139/ssrn.3762255.

Gao H., Huang J., Zhang T. (2020), Can online annual general meetings increase shareholders' participation in corporate governance?, *Financial Management*, 49(4), pp. 1029-1050. Doi: 10.1111/fima.12301.

Ghobakhloo M., Arias-Aranda D., Benitez-Amado J. (2011), Adoption of e-commerce applications in SMEs, *Industrial Management and Data Systems*, *111*(8). Doi: 10.1108/02635571111170785.

Guba E.G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries, *Ectj*, 29(2), pp. 75-91.

Guba E.G., Lincoln Y.S. (1982), Epistemological and methodological bases of naturalistic inquiry,. *Ectj*, 30(4), pp. 233-252.

Ianniello G., Stefanoni A. (2022), Redditività aziendale e partecipazione all'assemblea annuale degli azionisti nelle società italiane quotate in borsa, *RIREA*, 2, pp. 176-196. Doi: 10.17408/RIREAGIAS050607082022.

Iwasaki M. (2020), Are in-person shareholder meetings outdated? The value of implicit communication, *Asian Journal of Law and Economics*, 11(3). Doi: 10.1515/ajle-2020-0045.

Jensen M. C., Meckling W. H. (1976), Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 3(4), 305-360. Doi: 10.1016/0304-405X(76)90026-X.

Kastiel K., Nili Y. (2016), In Search of the Absent Shareholders: A New Solution to Retail Investors' Apathy. *Delaware Journal of Corporate Law*, 41, 55.

Kiu C.T.T., Chan J.H. (2024), Firm characteristics and the adoption of data analytics in performance management: a critical analysis of EU enterprises, *Industrial Management and Data Systems*, *124*(2). Doi: 10.1108/IMDS-07-2023-0430.

Kraus S., Durst S., Ferreira J.J., Veiga P., Kailer N., Weinmann, A. (2022), Digital transformation in business and management research: An overview of the current status quo, *International Journal of Information Management*, 63, 102466. Doi: 10.1016/j.ijinfomgt.2021.102466.

Krieger F., Drews P., Velte P. (2021), Explaining the (non-) adoption of advanced data analytics in auditing: A process theory, *International Journal of Accounting Information Systems*, *41*. Doi: 10.1016/j.accinf.2021.100511.

Lafarre A., Van der Elst C. (2018), Blockchain technology for corporate governance and shareholder activism, *European Corporate Governance Institute (ECGI)-Law Working Paper* (390). Doi: 10.2139/ssrn.3135209.

Lattemann C. (2005), The use of ICT in annual shareholder meetings and investor relations: An examination of the German stock market, *Corporate Reputation Review*, 8(2), 110-120. Doi: 10.1057/palgrave.crr.1540243.

Maneesriwongul W., Dixon J.K. (2004), Instrument translation process: a methods review, *Journal of advanced nursing*, 48(2), pp. 175-186.

Matarazzo M., Penco L., Profumo G., Quaglia R. (2021), Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective, *Journal of Business Research*, 123, pp. 642-656. Doi: 10.1016/j.jbusres.2020.10.033.

Moro Visconti R. (2020), Corporate governance, digital platforms, and network theory: information and risk-return sharing of connected stakeholders, *Management Control*, 2, pp. 179-204, Doi: 10.3280/MACO2020-002009.

Morrow Sodali (2020), *The 2020 European AGM season. Taking stock of the shareholder sentiment and looking forward to 2021*. Morrow Sodali.

Nili Y., Shaner M. W. (2022), Virtual Annual Meetings: A Path Toward Shareholder Democracy and Stakeholder Engagement. *Boston College Law Review*, 63, 123.

Obialor C., Ayileka A. (2020), COVID-19: Virtual AGM and the Need for Business Continuity, *SSRN Electronic Journa.* Doi: 10.2139/ssrn.3719125.

Oliveira T., Martins M. F., & Lisboa U. N. de (2011), Literature Review of Information Technology Adoption Models at Firm Level, *Review of Economics Studies*, *14*(1).

Olutoyin O., & Flowerday S. (2016), Successful IT governance in SMES: an application of the Technology-Organisation-Environment theory, *South African Journal of Information Management*, *18*(1), pp. 1-8.

Paoloni P., Manzo M., Procacci V. (2023), The impact of the pandemic crisis on the digital transition process of Italian SMEs, Suppl. 2, *Management Control*. Doi: 10.3280/MACO2023-002-S1005.

Patton M. Q. (2002), *Qualitative research & evaluation methods*, Sage.

Puklavec B., Oliveira T., Popovič A. (2018), Understanding the determinants of business intelligence system adoption stages an empirical study of SMEs, *Industrial Management and Data Systems*, *118*(1). Doi:10.1108/IMDS-05-2017-0170.

Rose J., Johnson C.W. (2020), Contextualizing reliability and validity in qualitative research: Toward more rigorous and trustworthy qualitative social science in leisure research, *Journal of leisure research*, 51(4), pp. 432-451.

Rosli K., HP Yeow P., & Eu-Gene S. (2013), *Adoption of audit technology in audit firms.*

Schwandt T. A., Lincoln Y. S., & Guba E. G. (2007), Judging interpretations: But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation, *New directions for evaluation*, (114), pp. 11-25.

Schwartz-Ziv M. (2021), How shifting from in-person to virtual-only shareholder meetings affects shareholders' voice, European Corporate Governance Institute – Finance Working Paper (748). Doi: 10.2139/ssrn.3674998.

Seshadrinathan S., Chandra S. (2021), Exploring factors influencing adoption of blockchain in accounting applications using technology-organization-environment framework, *Journal of International Technology and Information Management*, *30*(1), pp. 30-68.

Siew E.G., Rosli K., Yeow P.H.P. (2020), Organizational and environmental influences in the adoption of computer-assisted audit tools and techniques (CAATTs) by audit firms in Malaysia, *International Journal of Accounting Information Systems*, *36*. Doi: 10.1016/j.accinf.2019.100445.

So I. G., Haron H., Gui A., Princes E., & Sari S. A. (2021), Sustainability reporting disclosure in Islamic corporates: do human governance, corporate governance, and IT usage matter?, *Sustainability*, *13*(23), 13023.

Stjepić A. M., Pejić Bach M., & Bosilj Vukšić V. (2021), Exploring risks in the adoption of business intelligence in SMEs using the TOE framework, *Journal of Risk and Financial Management*, *14*(2), 58.

Strätling R. (2003), General meetings: a dispensable tool for corporate governance of listed companies?, *Corporate Governance: An International Review*, 11(1), pp. 74-82. Doi: 10.1111/1467-8683.00303ù

Subramaniam R., Singh S.P., Padmanabhan P., Gulyás B., Palakkeel P., Sreedharan R. (2021), Positive and Negative Impacts of COVID-19 in Digital Transformation, *Sustainability*, 13(16), 9470. Doi: 10.3390/su13169470.

Tornatzky L.G., Fleischer M., Chakrabarti .K. (1990), The processes of technological innovation. *(No Title)*.

Ullah F., Qayyum S., Thaheem M. J., Al-Turjman F., Sepasgozar S.M.E. (2021), Risk management in sustainable smart cities governance: A TOE framework, *Technological Forecasting and Social Change*, *167*. Doi: 10.1016/j.techfore.2021.120743.

Van der Krans A. (2007), The virtual shareholders meeting: How to make it work, *Journal of International Commercial Law and Technology*, 2, 32.

Wang Q, Wang K. (2021), Does high-speed rail stimulate shareholder activism by small investors in China?, *China Journal of Accounting Studies*, 9(3), pp. 408-431. Doi: 10.1080/21697213.2021.2009178.

Widuri R., Handoko B. L., Prabowo I. C. (2019, May), Adoption of information technology in public accounting firm, *Proceedings of the 4th International Conference on Big Data and Computing* (pp. 198-202).

Yao S., Pan Y., Wang L., Sensoy A., Cheng F. (2022), Building Eco-friendly Corporations: The Role of Minority Shareholders, *Journal of Business Ethics*, pp. 1-34. Doi: 10.1007/s10551-022-05291-y.

Zhang F., Yang J., Xu Z., & Zhu G. (2018), Large shareholder participation behaviors, managers' risk-taking and firm innovation performance: A shareholder activism perspective, *Nankai Business Review International*, 9(1), pp. 99-115.