# THE ROLE OF POLITICS IN DIGITAL TRANSFORMATION OF HEALTHCARE: A DEVELOPING COUNTRY CONTEXT

Dragana PAPAROVA
*Department of Informatics, University of Oslo*
*Gaustadalléen 23B, 0373 Oslo, Norway*
dragap@ifi.uio.no

Mijalche SANTA
*Faculty of Economics-Skopje, Ss. Cyril and Methodius University in Skopje*
*Goce Delcev 9B, 1000, Skopje, North Macedonia*
mijalche.santa@eccf.ukim.edu.mk

*Abstract*

*This paper argues that the digital transformation of healthcare requires governmental interventions and a radical approach to change in highly political environments, in a developing country context. We conduct a longitudinal case study of the implementation of the national e-health platform in North Macedonia, connecting primary, secondary, and tertiary healthcare services. Our findings show how the implementation of the national e-health platform drove disruptive changes to healthcare service delivery, followed by incremental organizational and technological adaptations. We contribute to the literature on digital transformation by emphasizing the role of politics in driving changes in digital transformation processes.*

*Keywords: digital transformation, healthcare, politics*

## 1. Introduction

The changes digital technologies impart to citizens, organizations, and societies have been central to information systems (IS) research. Various IS phenomena have been investigating such changes (Baiyere et al., 2023); digitization, referring to the transition from analog to digital information, e.g., from paper-based to electronic patient records (EPR); digitalization, referring to changes in organizational work processes with the adoption and use of digital technologies, e.g., automation of work processes; and digital transformation (DT), referring to larger-scale and radical changes driven by digital technologies, that incrementally unfold over time (Hanelt et al., 2020).

Within organizations, DT regards the redefinition of organizational business models, value propositions, or organizational identities (Wessel et al., 2021). Across organizations, DT refers to changes around actor constellations, joint structures, values, norms, or laws (Hanelt et al., 2020; Tana et al., 2023), that also lead to societal changes irreducible to individual organizations, or inter-organizational relations (Braa et al., 2023).

Our aim with this paper is to understand DT in the healthcare sector in a developing country context by focusing on the role of politics. The role of politics is significant to study as the healthcare sector is commonly publicly owned, cutting across public and private actors, and highly regulated by laws. IS scholars have been implying how DT research should account for the role of institutions (Hinings et al., 2018) and how an institutional perspective could be useful for studying changes driven by digital technologies in the healthcare sector (Burton-Jones et al., 2020; Hinings et al., 2018; Sahay et al., 2009). However, with these and some other exceptions (e.g., Braa et al., 2023), the role of politics has not been receiving much attention in studying DT within or across healthcare organizations.

In this paper, we study DT in the healthcare sector of North Macedonia, as a national e-health platform for booking appointments across primary, secondary, and tertiary healthcare services was introduced in 2011. Over the years, the platform has been enriched with various functionalities, such as e-referrals and e-prescriptions, and more recently, patient-centric functionalities. This paper seeks to answer the following research question: *How does the digital transformation of healthcare unfold in a highly political environment, in a developing country context?* The findings show how governmental interventions were crucial to driving the DT of healthcare. The government took a radical approach to introducing mandatory changes that applied to the sector as a whole, followed by incremental organizational and technological local adaptations over time.

The paper proceeds as follows. In the next section, we review the literature on digital transformation. In section three, we present our choice of qualitative methodology, the data-gathering process, and the case study background. In section four, we present the findings, following the role of politics in societal digital transformation in a developing country context. Section five presents the discussion and conclusion of the paper.

## 2. Research background
### 2.1. Digital transformation
The pervasiveness of the digital in transforming organizations, sectors, industries, and societies has been core to debates in the IS field for decades (Baiyere et al., 2023; Baskerville et al., 2020; Orlikowski & Iacono, 2001). The digital has been central to various IS phenomena signifying changes in organizational work practices, sectorial or industrial actor relations, or addressing grand societal challenges; a central distinction of the changes imparted by digital technologies has been between the digitization, digitalization, and digital transformation perspectives (Baiyere et al., 2023).

The digitization view refers to the process of converting physical or analog information into digital (Yoo et al., 2010, 2012), e.g., changing from paper-based to digital record keeping. According to Baiyere et al., (2023) this view focuses on the technical qualities of the digital, i.e., its material properties, such as the hardware, software, or information processing capabilities. The digitalization view, on the other hand, expands the digitization view by shifting the focus from the material properties of the technology to its application in organizations, industries, sectors, or societies at large. The focus, in this view, is on actors pursuing specific individual, organizational, or societal goals within a certain context, i.e., expanding toward regulatory, or political complexities (ibid.). These two views have commonly treated change as planned, i.e., aimed at improving organizational effectiveness and efficiency through the utilization of digital technologies.

Digital transformation, on the other hand, refers to multiple processes of innovating with digital technologies (Hinings et al., 2018), that are commonly distributed, encompassing continuous changes, and requiring that both the drivers and effects of digital technologies are understood beyond single organizations, e.g., digital platform ecosystems (Hanelt et al., 2020). A central aspect of DT is understanding "change"; Hanelt et al. (2020) have conceptualized this change as convergent or episodic rather than one-time, radical, or disruptive. Therefore, changes may occur as a response to external drivers, such as new regulations, market evolution, and customer demands, can be unintentional and can accumulate over time, and are also based on environmental feedback and emerging opportunities.

IS scholars have also tried to understand change by opposing DT to information technology (IT)-enabled organizational transformation (Vial, 2019). In the view of Wessel et al. (2021), IT-enabled organizational transformation signifies a change in which digital technologies support and optimize an already existing business model, value proposition, or organizational identity. DT, on the other hand, results in new or redefined business models, value propositions, and organizational identities, driven by digital technologies.

Beyond the organizational perspective, various authors have argued for an inter-organizational or societal approach to studying DT (Braa et al., 2023; Tana et al., 2023). For instance, Tana et al. (2023) have developed a conceptual framework for studying DT as a collective social action, i.e., "purposive cooperation among social actors (e.g., individuals or groups) who, united through shared values and norms, pursue a joint objective (i.e., instigate transformative change using IT) in their own socioeconomic realities (i.e., a setting within or outside formally defined organizational boundaries)" (p. 1621). The collective social action shifts the unit of analysis from organizations to social actors, their actions, and their impact. These social actions are, at the same time, limited by structural constraints, laws, contracts, norms, and values.

Overall, a central aspect of the IS literature on DT is the two-way interaction between digital technologies and organizations, institutions, or societies at large; digital technologies drive changes in organizational work processes, institutional or societal laws, values and norms, but are also changed by them in return.

### 2.2. Digital transformation and the role of institutions

Some authors have argued how digital transformation should be studied beyond understanding the changes imparted by digital technologies, to also unpacking the role of institutions in enabling or constraining such changes (Burton-Jones et al., 2020; Hinings et al., 2018).

For instance, Hinings et al. (2018) pointed out that DT is an institutional change, as organizations are influenced by sociocultural prescriptions. "Understanding DT warrants examining how new digitally enabled institutional arrangements emerge, diffuse (i.e. digital innovations), and thus become accepted as legitimate within an institutional context" (p. 56). Overall, the authors argue how DT should be studied as embedded in an institutional context that includes not solely organizations, but also governmental agencies, regulators, and professional associations who define and monitor compliance with set rules, values, and norms.

Burton-Jones et al. (2020) utilize institutional theory in an empirical study of DT in healthcare, following the rollout of a single electronic patient record (EPR) system across nearly all public hospitals in Australia (27 in their case). The project shifted from a phased to a big-bang approach with sites taking turns to implement the full system in sequence. The authors argue how institutional theory offers an understanding of pressures on organizations and their responses to such pressures, and this is important for studying DT in healthcare settings where

organizations aim to maintain legitimacy in a social context, instead of acting for economic efficiency. Overall they suggest that scholars studying DT should "[f]ind ways to speak up about institutional complexity and institutional logics without being naive about the difficulties involved in politically-sensitive contexts." (p. 12)

In line with these works, more recently, Braa et al. (2023) theorized societal-level DT as irreducible to an organizational perspective; an approach that moves from discussing organizational structures, antecedents, outcomes, and control to focusing on emergence, iteration, flows, and multiscale dynamics, from individual health clinics, to global policies and strategies. The authors argue how a societal perspective on DT is irreducible to an organizational perspective, and instead, allows for studying systemic changes in public sector organizations, such as healthcare organizations that operate in a highly regulated environment, encompassing various public and private actors, governmental agencies, and professional associations (Braa et al., 2023).

The importance of institutions in IT initiatives in healthcare, although not concerning digital transformation processes, can also be traced back to earlier IS works focusing on the interplay of technology and politics. For instance, through a case study of integrating health information systems in two regions in southern India, Sahay et al. (2009) show how the asymmetries of power among stakeholders and the heterogeneity of politics shaped technological integrations. In this paper, we build on these works (Braa et al., 2023; Burton-Jones et al., 2020; Sahay et al., 2009; Tana et al., 2023) and study societal DT in healthcare by exploring the role of politics in a developing country context.

## 3. Methodological approach

We conducted a qualitative methodology, using case study as a method (Thomas, 2015). This allowed us to study DT processes and the role of politics by acknowledging their real-world complexity. The data gathering was initially based on seven interviews conducted in 2018, lasting for approximately 30 minutes each. The interviews were followed by a subsequent analysis of press releases and news articles, videos, and websites, to enrich the retrospective analysis and follow the recent changes to the system. The data gathering sources are summarized in Table 1.

| Interviews | | |
|---|---|---|
| *Organization* | *Job position* | *Interview type* |
| General practitioner's office | Doctor | Face-to-face |
| General practitioner's office | Doctor | Face-to-face |
| General practitioner's office | Doctor | Face-to-face |
| Dental clinic | Doctor | Face-to-face |
| IT software vendor | Software developer and manager | Face-to-face |
| IT software vendor | Software developer | Written answers to an interview guide |
| IT software vendor | Software developer | Phone interview |
| | *Total interviews* | *7* |
| **Videos** | | |
| *Description* | *Amount* | |
| Instructions for healthcare professionals on how to use "My Time", TV program in which the program team explains "My Time 2.0", and TV program about "My Doctors" | 3 | |

| Press releases and news articles | |
|---|---|
| *Description* | *Amount* |
| Information about released versions, added functionalities, experiences organizational challenges, software applications integrated with "My Time"… | 15 |
| **Websites** | |
| *Description* | *Amount* |
| Official websites "My Time" and "E-health" | 2 |

Table 1: Summary of the data gathering process

To analyze the empirical material we conducted a process analysis (Cloutier & Langley, 2020), aimed at unpacking the radical and incremental changes that underpinned the DT of the healthcare sector. Such changes required an interplay of digital technologies, organizational work processes, and governmental interventions. This resulted in four phases across which the findings are organized and presented in section 4.

### 3.1. Case background

As of the first decade of the 2000s, primary, secondary, and tertiary services in North Macedonia were using a combination of paper-based and electronic patient records (EPR) in healthcare delivery. Oftentimes, healthcare professionals would duplicate and record data twice; once in their paper-based record, and another time in their organizational EPR system. Healthcare organizations could choose independently which EPR systems to implement. The systems were mostly used as databases for healthcare information within a single organization, adapted to support particular work tasks, differing in terminologies of diagnosis and diseases, and with different information security levels.

As of 2010, the government in North Macedonia started exploring possibilities for introducing a national solution for improving healthcare information storage and exchange with the usage of digital technologies across primary, secondary, and tertiary services. The decision was to procure a national e-health platform for electronic patient records, that would interconnect the existing IT systems.

At the beginning, the platform only covered a narrow range of modules, including booking appointments, and referrals, but over time, additional modules and functionalities were added. The system got integrated with national registries and about 30 organizational IT systems. As of 2023, the platform is used by 4800 general practitioners, 3700 specialists, 900 healthcare professionals in the tertiary healthcare service delivery, and about 4000 healthcare organizations.

We start our empirical account in 2011, when the government decided to implement the national e-health platform, hereafter regarded as "My Time".

## 4. Findings: the politics of societal digital transformation in healthcare
### 4.1. The radical change: Implementing a nation-wide e-health platform

"My Time" was launched as a pilot project on December 1, 2011, and implemented in three major hospitals in Skopje, the capital city of North Macedonia; on June 1st 2011, the system was officially rolled out across the country. The initial version of "My Time" was defined around two functionalities: 1) recording electronic patient information e.g., working as an

electronic database for patient information, diagnosis, or treatment; and 2) appointment booking across the different levels of healthcare services. Both functionalities were aimed at healthcare professionals and were already part of the organizational work practices. These functionalities were expected to standardize the patient records across the country e.g., disease and treatment terminology, but also lower the waiting lines for appointments across healthcare organizations, which would free up resources and optimize the work of healthcare personnel.

The implementation occurred in stages, municipality by municipality, and within the first month, the system was used in over 20 municipalities. The launching date was set a priori by the Ministry of Health who owned the project and governed it by establishing a project team. The central team, assigned by the Ministry, decided which functionalities would be available centrally, and how these functionalities would connect with the IT systems already utilized across clinics, departments, healthcare institutions, and organizations from different geographical areas across the country. The need for centralizing the decisions for implementing the platform could be rationalized around at least two reasons.

First, at that time, the software market for healthcare organizations was relatively homogeneous. There were four larger EPR systems in use across primary healthcare organizations (general practitioners and dentists) and a few smaller vendors. The software vendors were expected to integrate with the national platform before the fixed launch date on June 1st 2011, and implement the mandatory changes. The four larger vendors managed to do the necessary integrations, however, most of the smaller IT vendors who had limited resources did not manage to execute these integrations and had to withdraw their solutions from the market. Therefore, healthcare organizations could continue using their EPR systems only if the system is integrated with "My Time"; otherwise, healthcare organizations would need to use the user interface of the "My Time" platform.

The process of IT integration was not as straightforward. Despite the mandatory changes vendors had to implement before the launch date, the integration required ongoing efforts. The "My Time" system was changing constantly, and adding new functionalities. The initial versions of the system lacked functionalities for some organizational work processes, especially for the processes that were not common across many organizations. Therefore, the first three-four years the system released various official versions, which also required constant changes in the vendors' EPR systems, with limited time to do the necessary testing.

Second, besides the homogeneity of the software vendor market, the healthcare sector was immature in utilizing digital technologies in organizational work practices. Before the "My Time" platform was implemented, many healthcare organizations recorded patient information in a paper-based format. For them, the mandatory transition to utilizing "My Time" required a more radical change, from paper-based to electronic healthcare records. The ones that were using EPR systems, were mostly utilizing them as databases, but had no functionalities for exchanging patient information across various organizations. Despite these differences, healthcare personnel did not receive any training in how to use the "My Time" platform. Instead, healthcare personnel would get help from the IT software vendors, which then communicate with "My Time" and give feedback on the necessary functionalities.

This approach – implementing mandatory changes with limited to no involvement from healthcare organizations – led to an initial response to the implementation which was quite critical. Healthcare professionals did not quite understand how the functionalities worked and had difficulties scheduling appointments when necessary. Moreover, various appointments were unutilized due to citizens not showing up.

Despite these challenges, "My Time" led to significant changes that improved the delivery of health and care services. E.g., it provided centralized numbers into the number of appointments scheduled, the number of patients who have (not) showed up, and later on, the number of e-prescriptions being given to patients. This helped the authorities understand how to utilize healthcare resources better and more cost-effectively. Moreover, the diagnoses and disease codes were standardized across organizations, patients and referrals had a particular number that had to be added when booking appointments. Every day, doctors had to send in their daily reports, and sign under the patient records. Healthcare organizations also employed people whose job was to add the necessary appointments across the systems. These, and other organizational changes were significant in the government's aspirations for digitalizing the health and care sector. Despite the technical and organizational challenges, the mandatory implementation and the radical approach to change by the government seemed necessary to pursue the national agenda to digitize and digitalize healthcare services.

### 4.2. Incremental adaptations: the interplay of centralized and local changes

As "My Time" was implemented, the system was followed by various subsequent changes to adapt to organizational work practices, and reflect the Ministry of Health's national agenda for the sector. "My Time" was governed by a central committee established by the Ministry of Health, that determined centrally what changes will take place. However, some EPR vendors also continued adding functionalities to reflect the variances across local healthcare organizations, but these functionalities would not be integrated with "My Time".

Beyond local adaptations, the Ministry of Health also worked on adding new centralized functionalities apart from the initial record-keeping and appointment-scheduling modules, towards the vision of connecting primary, secondary, and tertiary healthcare services. As of 2012, general practitioners could refer patients to specialist healthcare services and see the reports and results of such referrals in their EPR systems. Moreover, functionalities were added so that healthcare professionals could see e-prescriptions regarding specific patients, covering the pathway from their creation to their realization at the pharmacy. With this, the system became more integrated across all levels of health and care delivery. Additional changes followed in 2017, such as a module for seeing the medical history of patients with rare diseases, which would allow the doctors to be informed of these diseases when providing health and care and see the diagnosis and reports from specialists. Additional modules, such as to follow pregnancies and the gynecological history of patients were also added over time.

Despite these improvements, some organizations still felt that the system was not reflecting their work practices properly. For instance, for some time, specialist services could not leave free appointments for patients who require consistent consultations, such as chronically ill patients. Moreover, the technical integration was ongoing. Some users continued using both, their own EPR systems, and the national platform, with two different usernames and log-ins. This resulted in duplication of work. As of 2019, healthcare professionals could still not see a coherent history of patients' records, even though this was central to the national agenda. Data about patients could only be shared by sending referrals and getting reports back to the GPs from specialists.

Therefore, in the years following the launch of "My Time", the Ministry was making episodic, incremental changes to adapt the system to local needs, but also to fulfill the national agenda for integrated healthcare services. The implementation, initially taking place in a big-bang approach, and then continuing in a phased manner, was ongoing. Over time, both the

functionalities in the "My Time" platform and the organizational processes around utilizing the platform, stabilized.

### 4.3. The political disruption: replacing the national e-health platform

As of 2016, the country was facing political instability and the government changed. This led to a large restructuring of various public institutions, including healthcare. One decision that concerned the national e-health platform, was to migrate to a new system, called "My Time 2.0". This work started in late 2018, and as of April 2019, the new system version was implemented. The launch date was delayed for three weeks so that the software companies could implement the mandatory changes requested by the Ministry.

Some of the core changes were removing the "priority referral" and instead, adding two new types of referrals, the "urgent referral" and "referral without an appointment". The latter could be utilized seven days from the date of issue, at a time that is convenient for the patient and the specialist. Doctors could also attach lab results in the referrals. Moreover, general practitioners and gynecologists could refer patients directly to the laboratory; a practice that was previously done only by specialists. Such referrals could include, e.g., checking a hormonal status, or tests for glucose levels during pregnancy. Moreover, as of 2019, private healthcare organizations, such as clinics, and labs were also obligated to report their electronic patient records to the national system.

The implementation of the second version faced some challenges. For instance, gynecologists and pediatricians were added as general practitioners, instead of specialists in the system. This resulted in them not being able to prescribe certain medicines. Despite these technical overlooks that were quickly fixed, the largest challenges were organizational. Healthcare professionals were creating urgent referrals for patients who were not in an urgent condition. This resulted in a lack of appointments for patients in life-threatening situations. Moreover, "referral without an appointment" was added for patients who have the right to be checked in the following seven days, but the organization that needs to do the check-up did not have available appointments. These referrals were also given without enough grounds for the need for such a referral. Therefore, the Ministry decided to set up a committee that will control how these referrals were added, and if they have been misused by doctors in the organizational work practices.

Overall, the second version of "My Time" was an incremental improvement in terms of functionalities added. However, it was another mandatory change by the new government, obliging software vendors and healthcare organizations to implement the necessary technical and organizational changes. This created temporary technical instability and disrupted existing organizational practices.

### 4.4. The on-going dynamics: towards citizen-facing functionalities

From 2019, there were various initiatives to expand the functionalities of "My Time" towards citizen-centric health and care delivery. These changes were expected to make citizens an active participant in decisions about their health.

One attempt towards this aim was an app, developed by two young entrepreneurs from Sweden and North Macedonia, who used the application programming interfaces of "My Time" to develop an integrated app for patients' insight into available appointments across healthcare services. The application was called "My Doctors", where users could choose a doctor and get

notifications when there is a free appointment. This application was not part of the official healthcare service delivery, and thus, was a significant attempt towards adding more variety to the healthcare services, without these changes being centrally initiated by the government.

However, in 2020 the global Covid19 pandemic started, and the "My Time" system was adapted to fit those needs. One significant change was the functionalities added toward telemedicine. Urgent patients could still show up for face-to-face treatment, but overall, patients were expected to receive medical care through video calls. The video services were integrated with "My Time", and patients got the links for connecting on their mobile phones.

The Covid19 pandemic also brought increasing awareness of the importance for citizens to have their health information easily available, and the importance of digital technologies in the health and care service provision. As a result, the Ministry started working on two additional projects. A website, "E-health", where citizens can find an overview of the digital solutions provided as a public healthcare service. More importantly, as of 2023, the Ministry also launched a citizen-centric app that gives patients an insight into valuable information about their health, called "My Health". Citizens could download the app on their mobile phone, get authenticated using a digital ID, and see the following information: visits at the general practitioner, diagnostic analysis, referrals to specialists, e-prescriptions, vaccination and certificates for vaccination, as well as other information from their personal health records. The data were both archival and real-time.

However, despite the provided citizen-centric functionalities, these changes were not radical to the health and care services across the country. First, the changes were not mandatory, but optional; e.g., healthcare organizations were not obliged to use telemedicine as opposed to face-to-face appointments, and citizens were not obliged to consume healthcare services through e.g., the citizen-centric app. The awareness of both healthcare professionals and citizens, of the importance of providing health and care services at a distance was quite low. Therefore, these functionalities, despite their potential, did not significantly transform the healthcare services, but provided incremental changes to a citizen-centric health and care delivery.

## 5. Discussion

This paper seeks to answer the following research question: *How does the digital transformation of healthcare unfold in a highly political environment, in a developing country context?* Our findings show how in a developing country context, where the software vendor market is homogeneous, and the healthcare sector is immature to realize the possibilities of digital technologies, the digital transformation (DT) of healthcare requires mandatory governmental interventions. This contradicts works in IS that have conceptualized DT as the incremental changes of various digital innovation initiatives (Hanelt et al., 2020; Hinings et al., 2018). In our case, DT required a radical approach to change, characterized by mandatory changes imposed by a central governmental actor, followed by episodic changes and incremental technological and organizational improvements.

Our findings build on other empirical studies that have shown how an initial big-bang implementation, followed by a phased approach could be useful in driving DT initiatives in healthcare (Burton-Jones et al., 2020), particularly when such initiatives are aimed at core systems, such as EPR. In our paper, DT is not driven by the disruptive potential of digital technologies, or by their integration and innovation with other digital technologies (Hanelt et al., 2020). This contradicts research that has taken a technology-determinism approach to DT

(Vial, 2019). Instead, DT was driven by governmental institutions and politics making direct interventions in organizational work practices in healthcare, with the utilization of digital technologies. This insight also builds on works, e.g., Sahay et al. (2009) who followed the asymmetries of power in integrating global health systems in two regions in southern India. While their focus is on the politics of integrating disparate systems, ours is on driving changes that go beyond system integration and instead, result in societal-level changes in how health and care services are provided.

In our case, DT encompassed both, digitization efforts in moving from paper-based to electronic patient health records (Yoo et al., 2010, 2012), and digitalization efforts in improving work practices of healthcare organizations (Baiyere et al., 2023). It also had disruptive effects on how health and care are provided, and consumed across the country as a whole, thereby having a societal scope of change (Hanelt et al., 2020). Therefore, DT was not solely organizational, and could not be understood through changes in value propositions driven by economic aspirations (Vial, 2019; Wessel et al., 2021). Instead, DT was societal and non-reducible to individual organizations' digital technologies and practices (Braa et al., 2023).

DT in our case can be characterized as a prescribed collective social action (Tana et al., 2023), as its objective was predetermined upfront, and the social actors were responding to a hierarchical governmental agency, i.e., the Ministry of Health. These pre-determined changes were mandatory, and necessary to make a large-scale change across primary, secondary, and tertiary healthcare services. The adoption and utilization of the national e-health platform was not an option, but an obligation for all healthcare organizations, and IT vendors involved. These insights side with others who have argued that understanding institutional pressures is an important aspect of DT (Burton-Jones et al., 2020; Hinings et al., 2018).

In our case, the institutional pressures resulted in the legitimization of healthcare organizations to the mandatory rules set by the Ministry; we argue that this pressure was necessary for DT to unfold. As a comparison, despite the external disruption in the environment during the Covid19 pandemic, organizational work practices barely provided healthcare at a distance. As the pandemic faded away, all organizational work practices reverted back to physical provision of health and care. Therefore, in our case, DT was not driven by organizational agility and response to disruptive changes in the external environment (Hanelt et al., 2020), but by mandatory organizational changes imposed by radical governmental interventions.

Overall, this paper argues that in a developing country context, where the software vendor market is homogeneous, and the healthcare sector is immature regarding the possibilities of utilizing digital technologies in healthcare, transformative effects require governmental interventions. Therefore, the role of politics was crucial and necessary for driving large-scale digital transformation processes in a highly institutional healthcare environment.

## References

Baiyere, A., Grover, V., Lyytinen, K. J., Woerner, S., & Gupta, A. (2023). Digital "x"—Charting a Path for Digital-Themed Research. *Information Systems Research*, *34*(2), 463–486. https://doi.org/10.1287/isre.2022.1186

Baskerville, R. L., Myers, M. D., & Yoo, Y. (2020). Digital First: The Ontological Reversal and New Challenges for Information Systems Research. *MIS Quarterly*, *44*(2), 509–523. https://doi.org/10.25300/MISQ/2020/14418

Braa, J., University of Oslo, Sahay, S., University of Oslo, Monteiro, E., & Norwegian University of Science and Technology. (2023). Design Theory for Societal Digital

Transformation: The Case of Digital Global Health. *Journal of the Association for Information Systems*, *24*(6), 1645–1669. https://doi.org/10.17705/1jais.00816

Burton-Jones, A., Akhlaghpour, S., Ayre, S., Barde, P., Staib, A., & Sullivan, C. (2020). Changing the conversation on evaluating digital transformation in healthcare: Insights from an institutional analysis. *Information and Organization*, *30*(1), 100255. https://doi.org/10.1016/j.infoandorg.2019.100255

Cloutier, C., & Langley, A. (2020). What Makes a Process Theoretical Contribution? *Organization Theory*, *1*(1), 263178772090247. https://doi.org/10.1177/2631787720902473

Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2020). A Systematic Review of the Literature on Digital Transformation: Insights and Implications for Strategy and Organizational Change. *Journal of Management Studies*, *58*(5), 1159–1197. https://doi.org/10.1111/joms.12639

Hinings, B., Gegenhuber, T., & Greenwood, R. (2018). Digital innovation and transformation: An institutional perspective. *Information and Organization*, *28*(1), 52–61. https://doi.org/10.1016/j.infoandorg.2018.02.004

Orlikowski, W. J., & Iacono, C. S. (2001). Research Commentary: Desperately Seeking the "IT" in IT Research—A Call to Theorizing the IT Artifact. *Information Systems Research*, *12*(2), 121–134. https://doi.org/10.1287/isre.12.2.121.9700

Sahay, S., Monteiro, E., & Aanestad, M. (2009). Configurable Politics and Asymmetric Integration: Health e-Infrastructures in India. *Journal of the Association for Information Systems*, *10*(5), 399–414. https://doi.org/10.17705/1jais.00198

Tana, S., The Australian National University, Breidbach, C. F., The University of Queensland, Burton-Jones, A., & The University of Queensland. (2023). Digital Transformation as Collective Social Action. *Journal of the Association for Information Systems*, *24*(6), 1618–1644. https://doi.org/10.17705/1jais.00791

Thomas, G. (2015). *How to Do Your Case Study*. SAGE Publications. https://books.google.no/books?id=CMiICwAAQBAJ

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, *28*(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003

Wessel, L., Baiyere, A., Ologeanu-Taddei, R., Cha, J., & Blegind Jensen, T. (2021). Unpacking the Difference Between Digital Transformation and IT-Enabled Organizational Transformation. *Journal of the Association for Information Systems*, *22*(1), 102–129. https://doi.org/10.17705/1jais.00655

Yoo, Y., Boland, R. J., Lyytinen, K., & Majchrzak, A. (2012). Organizing for Innovation in the Digitized World. *Organization Science*, *23*(5), 1398–1408. https://doi.org/10.1287/orsc.1120.0771

Yoo, Y., Henfridsson, O., & Lyytinen, K. (2010). The New Organizing Logic of Digital Innovation: An Agenda for Information Systems Research. *Information Systems Research*, *21*(4), 724–735. https://doi.org/10.1287/isre.1100.0322