The Impact of Digital Transformation on Crisis Management and Organizational Sustainability

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Abstract: *Organizations encounter greater problems currently. Massive developments are prompting worldwide and national companies to embrace new and creative management techniques by integrating new technology to transition from inflexible operating modes to agile mechanisms that better adjust to unpredictability. The Covid pandemic19 is only one example of the massive aftereffects of most catastrophes. This unprecedented global crisis has revealed the significance of rethinking firms' operational strategies to employ more flexible tools to assure sustainability, such as digital transformation to speed worldwide excellence transitions. The 2021 OECD numbers indicate how this crisis has harmed the world economy and organizations. Our research answers: "Can digital technology help organizations restructure and respond to crises? Our theoretical contribution establishes a conceptual paradigm for digital transformation-based organizational agility by linking organizational change, digital transformation, and agility. Managers help firms become agile and resilient by validating the conceptual model in an empirical framework and establishing digital transformation success criteria.*

Keywords: Digital Adaptation, Agile Leadership, Crisis Management

I. INTRODUCTION

Our environment has grown increasingly unstable and crisis-prone. This crisis has affected the economy, society, government, and environment. Thus, "agile practices" that combine new technology to move from old and often inflexible operating modes to processes more adapted to uncertainty are more important than ever. Most crises, notably COVID-19, have had major consequences19. This unprecedented global crisis has revealed the significance of rethinking business organizational strategies utilizing more flexible New Public Management methods like digital transformation, which accelerates international excellence transitions. The 2021 OECD estimates show that this crisis has hurt the world economy and organizations. Morocco has employed digital technology to gain organizational agility and resilience to handle unforeseen occurrences and enhance performance management to survive. Problem: progressive transition with paradoxes. It's an opportunity to improve dynamic crisis management skills despite the challenges. Digital transformation changes the whole company. Organizations must adapt quickly to new technologies' disruption and be adaptable and resilient to realize their potential. Thus, the rapid and unanticipated growth of the environment makes these modifications challenging but vital for enterprises that seek to sustain their model and provide value. You must identify ways to maintain balance while adapting the proper solution to the right circumstance.

'Organisational agility is the constant quest for balance between active, reactive, and proactive dimensions. Because companies' surroundings are complicated, disruptive, and inevitable, we will try to address the following study question: "Can digital technology help organizational transformation create crisis agility? Our scientific contribution approach will be deconstructed. First, we'll define "Organizational Agility" and review the literature to prevent it. Discussing 'digital transformation' technologies for emergency and future crisis management follows. Finally, we will analyze how digital transition affects organizational agility to give a conceptual framework for crisis-related organizational agility change.

II. LITERATURE REVIEW

A. Organizational Agility

In a changing world, organizations must adapt. Organizations must adjust their posture, mindset, and culture to innovate, seize opportunities, and value stakeholders amid rising and unforeseen challenges. Companies must be agile since change is hard. Management researchers have extensively studied "organizational agility". This implies wanting stability without organization-harming volatility. To prosper, organizations must have the ability to adapt to social, economic, political, and technical changes. According to Waltzlawick (1980), "not to face up to change is to inevitably expose oneself to disappearance". Thus, organizational flexibility drives performance. Darwin (1882) "The species that survive are not the strongest, nor the most intelligent, but those that best adapt to change". Organisations should be agiler."Learn from different situations to absorb, measure, and avoid shocks. Weick & Sutcliffe (2007) argue these three traits boost firms.

Companies improve via evolution. Actually, 'agile manufacturing' gives 21st-century management organizational agility. It helps organizations see risks and possibilities quickly. Indeed, the extensive literature characterizes organizational agility in many ways. According to Deharo (2018), organizational agility "become thus a lever for improving the capabilities of public organizations to face the different risks and changes of their environments". Goldman and Nagel (1993) say organizational agility helps organizations attract top managers to compete and adapt to unpredictable and chaotic settings. Risk-free activities are crucial in changing times. Agility helps firms handle rapid changes. In 2001, Dove argued agility requires profitability and organizational flexibility. It must initially earn more than spend. More environmental adaption is required. Rapid change is agile. Thus, agility addresses lucrative risks and possibilities.

Consolidating allows organizations to adapt to complex and unexpected business environment changes. This is like winning a risky performance challenge. Commercial proactivity implies immediately providing value to clients, cultural flexibility means changing, and social proactivity entails respecting people via knowledge management. Shafer (1997) proposed three organizational agility development capabilities: ability to read by being flexible and reactive to adapt to environmental changes, particularly unanticipated ones, and monitoring and innovating to capture the greatest possibilities; rapid response and improvisation to adapt to changes; and ability to swiftly adjust and incorporate organizational learning for responsiveness and proactivity. We can address strategic, operational, global, functional, technical, and human agility. The agile enterprise includes agility drivers, capabilities, and levers, according to Sharifi et al. (2001). Three traits enable organizational agility, which needs growth levers. The Sambamurthy et al. (2003) model organizational agility includes customer, partner, and operational agility.

Finally, the organizational agility model contains three capabilities: Strategic response: proactive market response; diverse team; operational response: anticipating change. Management sciences cover organizational agility in several ways. We'll list: Responsiveness: Zaheer & Zaheer (1997) describe responsiveness as a company's ability to promptly respond to external signals and evaluate data to make decisions. Organizational adaptability to dynamic, competitive, and environmental issues. Simple uncertainty management.

Successful organizations must adapt at any speed. In complex situations, organizational actors matter. Agility may help companies face unexpected situations. Crisis rocked systems and organizations. Many groups have flourished, while others have closed. Crisis circumstances may postpone organizational changes with various inconsistencies. Public organizations lack adaptability and resilience and are totally matched with their changing environment, making them more crisis-prone than private ones. The worldwide pandemic "Covid19" has forced public companies to adopt digital management strategies to respond to rapid change. THE WHO declares this outbreak "a public health emergency of universal scope" that must be addressed to minimize harm. All managers debate agile organizational changes to combat this sickness. Pandemics demand global digital transformation and new government. North Africa is adopting New Public Management because 'in response to limits, the organization seeks to optimize itself'. The chaotic system required a massive national effort due to limited resources. Distance has replaced face-to-face. Since the digital revolution in businesses caused the issue, Leaving old management approaches is important to implementing agile procedures. Goods and services have fallen and unemployment has increased despite redundancies, social assistance, and job losses.

Staff rotation and teleworking need digital tools to monitor distant actors. Virtual communication and digital revolution affect countries differently. Moroccan firms are faster and more responsive due to digital transformation. Remember that imprisonment restricted mobility and assembly. Videoconferencing and meetings need Zoom and Googlemeet. Emergency and future crisis resilience and flexibility need new organizational methods. Teleworking helps workers prepare and saves state money. If our activity allows it post-COVID, these new management methods are still part of our culture and habits. Telework may continue without acceleration, so educate multiskilling and readiness. All firms should have barriers to protect sensitive workers like physicians. Finally, organizations must employ modern technologies to adapt quickly to environmental changes and improve performance.

Companies adapt quickly to environmental changes. Success requires adaptability. Success seems to need adaptability and "organizational agility". HR facilitates flexibility. As the environment changes, staff must acquire dynamic abilities and contribute to digital transformation, which helps firms adapt.

B. Digital transformation as a catalyst for organizational agility

New technology helps organizations adapt to fast-changing surroundings. Consumer demands, digital transformation, and competition disrupt. To survive and compete, national and international enterprises must adapt and anticipate these changes. Flexible and resilient companies are needed for digital transformation. Technology should be integrated into the organization's operating model to enhance value and efficiency. Except that the latter may impact all aspects of human life as a fundamental link for social, political, and economic change. Morocco digitises too. It supports digital transformation to upgrade all structures for change. However, the "Covid 19" pandemic has proved that corporate reform needs digitalization to better customer access to services. Because of COVID-19, modern technology is better for business continuity and rapid service. The COVID-19 epidemic has accelerated all traditional firms' digital shift to survive. This digital revolution extends beyond tech-driven firm remodeling. In unpredictable times, digital transformation, the 4th global revolution, enhances back-end and front-end operations but cannot assure sustainability (Soto-Acosta, 2020). Digital change affects global decision-makers in all professions. Digital has transformed the firm, and new technologies will continue to disrupt as digital becomes important for organizational agility. Digitization changes businesses. Change helps conventional firms become nimble and digital. Success and global competitiveness need digital transformation. Before categorizing this complicated subject, digital transformation's history must be reviewed. Digital transformation is old.

Patel and McCarthy (2000) say digital transformation "first appeared in 2000". R. Reix (2002) emphasizes digitization. "IT remains popular! The organizational transformation rhetoric persists" . Significant digital transformation research supports this strategy. Although management scientists dispute on its definition, this theory is popular. Digital change is unclear. Some call it "changes induced by digital technologies in all aspects of human life". Digital transformation will change customer relationships, strategies, management, mentalities, and procedures beyond digital and electronic media. Digital transformation is "a combination of automation, dematerialisation and reorganisation of intermediation schemes". According to Orlikowski and Scott (2016) and Faraj et al. (2018), 'the great potential for transformation and reconfiguration of digital technologies on organisations is pushing scholars to do scientific study in this subject'

We believe this description is complete owing to ICT's rapid progress and organizational agility to react to permanent change. This digital transformation includes job automation, relationship and citizen experience improvement, low-cost communication, task dematerialization, administrative procedure simplification, and real-time information exchange. Constant acceleration may boost company performance. Organizations and users should share data better. Operational dashboards let professionals analyze citizen/client data in real time and make better decisions. The innovative and nimble future corporation will analyze all user data and remove comings and goings to better care. The "Covid19" health crisis prompted enterprises to embrace digital technologies to give the best and quickest services, reduce conflict, and build organizational agility to adjust. Online processing of large amounts of user data facilitates administration-citizen/business-customer collaboration and real-time data access. (2.0) Customers prefer digital channels over long queues for fast service. Digital transformation and dynamic abilities are required to adapt the company to changing environmental dynamics in all domains. Digital transformation may enhance productivity and the economy by changing many organizations' work methods. Users' IT learning is monitored.

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People are crucial to digital transformation because they can interact with the company/organization. Colin-All (2015) Customers may talk, suggest, and complain. Citizens desire speedier responses. New technologies provide "a better digital interaction modifying both the relationships and the interactions between customers and the company". Client involvement can only get "more personalised and possible through an increasing number of social platforms". "Cheaper and offer more benefits, reducing organisational costs". Digital transformation may virtualize jobs. Employees may "share their knowledge via virtual platforms thus reducing costs" to build organizations. Haussman Executive Search examined digital change.2, 90% of CAC 40 HAVE CDOs for digital transformation. Global digital transformation is increasing. Digital revolution turns change management into change ability. The study stresses organizational traits that enable the firm to adapt and be proactive in the face of environmental upheaval rather than change management alone in a digital transformation framework. Digital transformation success depends on the company's technology and market responsiveness.

Organisational agility involves cultural transformation and training. Organizational agility requires resource identification and use. Digital transformation is needed for this arduous process. The CEO must assess several strategic issues and develop a company-specific digital transformation plan as the digital business model transition is unclear. The formulation should encompass new technology, value-generating processes, organisational structures, and finances. Chief Digital Officer, CIO, and digital transformation leadership must be recognized while supporting business line and competence adjustments by the CEO. Digital transformation helps customers and transforms business models. The literature supports digital transformation two methods. Internal strategy, dynamic capabilities, and data. External factors affect value creation. Digital transformation is methodical and stakeholder-driven. Digital transformation strategies are used in agile organization change.

Systemic agile approaches, including new modes of operation, technology, and user experience, collaborative work tools and tele working space, an autonomous and multi-skilled team, a major information system change, and an improved user experience, are needed to make a traditional organization flexible. Strategic change, new business model, collaborative work, and digital culture need agility in digital transformation. Agile methods accelerate digital transformation model implementation. Recently, theorists and practitioners have created several models.

III. OBJECTIVES AND RESEARCH QUESTIONS

Our scientific paper has two goals. The first theoretical study addresses the fragmentation and shortage of research on organizational change, digital transformation, and agility. Our second goal is to empirically evaluate the conceptual model and determine the criteria for digital transformation to achieve organizational agility. Thus, our study question is: "Can digital technology support organizational transformation and crisis agility? Our scientific contribution will also address the two research hypotheses that follow:

H1: Digital transformation is not limited to the simple introduction of NT, but involves a profound reorganization of the functioning of an organization as a whole.

H2: In the face of environmental disruptions, digital change is insufficient and we need to move on to agile change.

IV. METHODOLOGY

This section emphasizes epistemology and method. Epistemology is "the critical study of knowledge, its foundations, principles, methods, conclusions and conditions of admissibility of its propositions". This definition divides epistemological reflection into four categories: ontological, which questions reality to be known; epistemic, which questions knowledge produced; methodological, which questions knowledge production and justification; and axiological, which questions knowledge values. Epistemology literature stresses positivism, interpretativism, and constructivism. We adopt the positivist paradigm, which suggests a reality independent of the researcher's understanding. Observed reality is causal. Moigne (1990) quotes Leibniz: "nothing ever happens without there being a cause or at least a determining reason". D'Amboise (1996) asserts that "there is only one concrete reality, independent of any opinion, waiting to be discovered and explored" where the researcher's perception does not change the data. Positivist validity requires verifiability, conformability, and refutability. According to Lapointe, positivism implies a stable, independent world from which knowledge is acquired. This may be shown by science or experiment. Understanding mirrors reality.

Knowledge is scientific if it matches external reality. According to research methodology literature, positivist, interpretative, and constructivist research may use qualitative methods. We will hypothetico-deductively test hypotheses using quantitative methodologies, consistent with our epistemology. Characterizing a population and proving causality are aims. The results may be generalized to the population depending on sample size. The funnel study in this theoretical research helps us comprehend organizational change, agility, and digital transformation. The results section will provide a conceptual model.

V. RESULTS

The result section will present a theoretical model from the literature to drive digital transformation, which involves analyzing the impact of digital transformation on the organization and choosing the position to occupy, examining the current state of the organization compared to the desired state, defining the approach to adjusting this gap, and defining the concrete actions In practice, these stages: Digital transformation requires the firm to assess its current state, describe its effects, drivers, scenarios, and objectives, establish a strategy, and technically implement and support the change. Digital transformation should be firm-specific.

Digital enterprises need organizational and management skills to adapt to environmental changes. Using new technologies and being proactive requires entrepreneurial, IT, and organizational skills. Innovation and route dependency increased dynamic capacities. Dynamic capacity integrates, generates, and reorganizes internal and external capabilities to respond to rapid environmental changes.

Agile procedures and dynamic skills, not organizational norms, determine an organization's ability to innovate and adapt, according to Prahalad and Hamel's (1990) competence theory. Operational response capability requires structure to anticipate change, whereas strategic response requires proactive market response and a diverse workforce. Burns and Stalker showed that contextual factors impact organizational structure and change during digital transition using structural contingency theory.

Complex, codified, and centralized, traditional organizations have regular responsibilities, rationalized and specialized labor, top-down choices, and planned organizational change. Organisations adapt better with dynamic structures, skill and knowledge development, cooperation, decentralisation, and emergent change. IT knowledge aids proactive environmental planning, according to environmental, technical, and industrial literature.

IT aids environmental preparation and competition. Evidence also reveals that IT skill predicts corporate success, a proactive environmental strategy does, and IT exploitation does. Moving from digital to agile doesn't imply abandoning traditional operations. Ambidextrous firms may accelerate agile digital transformation. Ambidextrous firm uses classic and modern technologies well. Innovation and digital transformation are enabled by ambidextrous organizations (Plane, 2017 Figure depicts three potentially related concepts. Leadership and culture must change for organizational transformation, says Kotter (1997). Digital transformation comprises systematic organisational change focused on team, collaborative, teleworking, deep IS change, and user experience. Organizational agility, based on contingency theory and human relationships, emphasizes adjusting to chaos and interconnectedness.

Adaptable management and organizational structures make the task great. Leadership fosters cooperation, curiosity, and autonomy, increasing organizational flexibility. Organizational structure, technology, and culture impact agility. Employee autonomy and collaboration increase with lower hierarchies and blurring cross-functional boundaries. Organizational and technical changes encourage asset and information exchange. Openness, curiosity, and ambiguity in the company's creative culture impact awareness. Agile organizations can handle uncertainty in consumer interactions, internal processes, and external business partners, according to Cronin (2000), Tapscotte et al. (2000), and Treacy and Wiersema (1993).

Agile entrepreneurs use current technology and flexible frameworks to facilitate quick change by encouraging experimentation and learning rather than driving change. Complex organizations' agility orientation may be challenging and costly owing to investments, compromising efficiency. Agile, efficient entrepreneurial managers provide organizational adaptability. Resource theory Management science and organizational agility depend on Penrose (1959). Based on route dependencies, "the firm's ability to integrate, create, and reconfigure internal and external skills to respond quickly to environmental changes" (Teace, Pisano, Shuen, 1997) suggests innovation. Information

management and regularities (Nelson and Winter, 1982) assist the dynamic capabilities approach change the firm's resource/capability portfolio.

More dynamic surroundings need dynamic talents. Organizational agility is beyond its dynamic capabilities. These skills provide companies an edge. Agility involves two dynamic talents: monitoring one's surroundings to build market knowledge and making choices based on it. Chonko and Jones (2005) suggest that attention does not need significant effort to perceive these two dynamic aspects. Organizational agility requires real-time information exchange for opportunity-awareness and judgment-making. To ease dynamic environment adaptation, firms need competency. Scholars and practitioners investigate organizational agility, a novel management concept needed in a changing environment. The digital revolution of Industry 4.0 inhibits organizational agility analysis and growth.
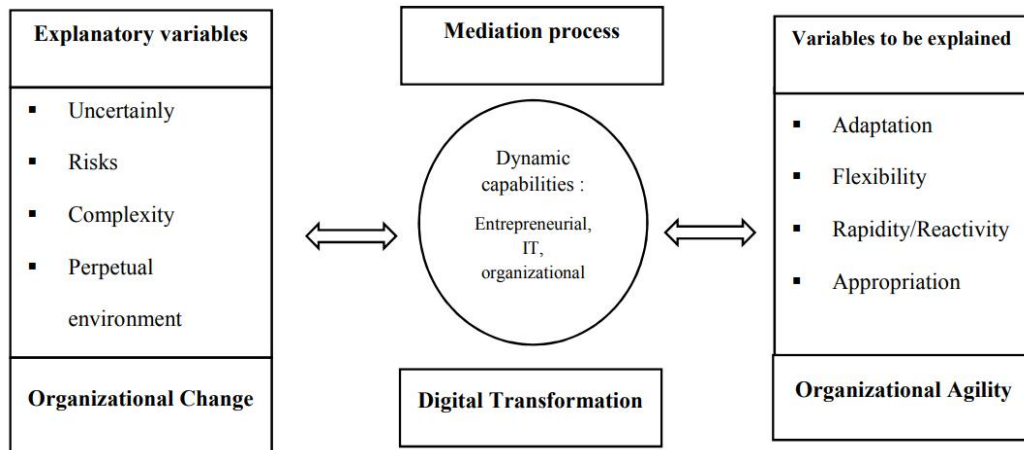

Figure 1: Conceptual model of research

VI. IMPLICATIONS AND CONCLUSION

Today, the company endures fast technological development and strong competition. Since risk and uncertainty threaten the organization's survival and viability, organizational agility is a vital reaction to make it adaptable, guaranteeing agile transformation and constant adaptation to the changing environment to stay competitive. Innovation and proactivity are needed in uncertain and unpredictable times. As a consequence, organizational agility is essential, and the company must undergo a digital transformation beyond the mere adoption of technology to modify organizational processes in a systematic manner using agile approaches. A digital organization should not sacrifice traditional activities, so an ambidextrous organization combines the effective and efficient use of traditional activities with the exploration of new opportunities linked to new technologies.

To achieve organizational agility, establish dynamic skills and operate in startup mode. In complex organizations, agility orientation is difficult and expensive, putting efficiency at risk. To achieve organizational agility, the entrepreneurial manager must combine flexibility with efficiency. In a disruptive environment, digital transformation is essential for enterprises' survival and success. So, digital transformation is a force of fast change. Additionally, an organizational culture should be established to accommodate the agile paradigm shift. Organizational agility is promoted as a facilitator of organizational change, however its characteristics are unclear.

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