

An Assignment of

“Technology advances - specifically in the areas of e-Commerce and e-Business have rendered traditional models of organisational structure and theories of management roles obsolete in the light of the changing nature of 21st century corporations.”

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Submitted To

Dr Akshay Narayanan

Submitted By

Name: Sanjida Akther Eva

Student ID: 2510973

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Introduction

The 21st-century business environment is undergoing a profound transformation, fueled by rapid technological advancements in e-commerce and e-business. Over the past two decades, the widespread adoption of digital platforms, artificial intelligence, cloud computing, and advanced data analytics has fundamentally reshaped how organizations operate, compete, and create value. Rather than just improving individual tasks, these technologies have boosted overall efficiency and productivity while completely redefining customer engagement, internal communication, and strategic decision-making (Verhoef et al., 2021; Vial, 2020; Wessel et al., 2021). As firms lean more heavily into real-time data and interconnected digital ecosystems, traditional organizational boundaries are beginning to blur, giving rise to more fluid and networked structures.

Unlike earlier waves of technological change that primarily polished existing processes, contemporary digital transformation is altering the foundational logic of organizational design and management. Modern firms now operate in environments defined by volatility, uncertainty, complexity, and ambiguity. In this landscape, success depends on rapid adaptation, continuous innovation, and a keen responsiveness to shifting customer expectations. Consequently, technology has moved from a mere supportive function to a central driver of organizational change, actively shaping operations, strategy, and culture (Hanelt et al., 2021).

At the same time, the expansion of e-commerce and e-business has intensified global competition while tightening the connectivity between organizations, customers, and markets. Digital technologies allow firms to transcend geographical boundaries and engage customers directly, opening new doors for value creation even as coordination becomes more complex. Global evidence highlights that digital integration, artificial intelligence, and platform-based ecosystems are now deeply embedded in organizational design, accelerating the pace of change and heightening the need for agility (Verhoef et al., 2021; Jacobides et al.,

2021; Vial, 2020). Ultimately, the continued rise of these digital ecosystems and AI-driven business models will only further reshape organizational structures and the nature of competitive dynamics.

Background

Traditional organizational structures and management theories were born out of the industrial era—a time defined by stable environments, predictable markets, and a heavy emphasis on efficiency and control. These classical approaches relied on hierarchical authority, formal rules, and clearly defined roles to coordinate large-scale operations. This framework was highly effective when tasks were routine, processes were standardized, and change happened gradually. In this setting, management roles focused primarily on supervision and coordination, perfectly reflecting the needs of organizations operating within these stable structures.

However, the rise of e-commerce and e-business has fundamentally disrupted these long-standing assumptions. Digital technologies have transformed everything from external market interactions to internal workflows, making rigid hierarchies and centralized control far less effective. Today, data-driven decision-making, real-time communication, and digital collaboration demand a level of flexibility and responsiveness that traditional models simply can't provide. As a result, many organizations are shifting toward flatter structures, cross-functional teams, and decentralized decision-making (Verhoef et al., 2023).

Recent research highlights that digital transformation isn't a one-time event, but an ongoing, dynamic process that constantly reshapes organizational capabilities (Hanelt et al., 2021). This evolution calls for entirely new approaches to leadership. In a digital environment, managers need competencies that look very different from those of the industrial age; they are increasingly expected to facilitate innovation and coordinate complex knowledge rather than just supervising routine tasks.

Crucially, the impact of this digital shift isn't uniform across the globe. While organizations in developed economies often lean on advanced infrastructure and a highly skilled workforce, those in developing economies may struggle with limited technology access and institutional hurdles (Kraus et al., 2021; OECD, 2022). Consequently, the way digital structures and management practices are adopted varies significantly, raising important questions about whether traditional models remain universally relevant. Ultimately, the transformation of management roles is a product of its environment, shaped by specific contextual factors

like economic development, organizational culture, and resource availability (UNCTAD, 2023; Bongomin et al., 2020).

Purpose of the Study

Against this backdrop, a critical question emerges: to what extent have technological advances in e-commerce and e-business rendered traditional organizational structures and management theories obsolete? While some scholars argue that the modern emphasis on agility, innovation, and decentralization has made hierarchical models a thing of the past, others suggest these frameworks still perform essential functions, providing necessary coordination, control, and stability (Schmeisser, 2026; Besio, 2024).

The purpose of this study is to critically evaluate whether traditional organizational structures and management roles have truly become obsolete in the 21st-century corporate world. Rather than taking a one-sided perspective, this research seeks to provide a balanced and nuanced analysis. It considers both the transformative power of digital technologies and the enduring relevance of foundational management principles (Dhingra et al., 2025). By doing so, the study explores how organizations are adapting to technological shifts, particularly within the realms of e-commerce and e-business, where digital transformation is most intense.

Furthermore, this study examines how these transformations differ between developed and developing economies, recognizing that technological change does not hit every organization in the same way. By including this comparative lens, the analysis highlights that organizational transformation is highly contextual; the relevance of traditional models often depends on specific environmental and organizational conditions (Zhu, 2024; Shahzad et al., 2025). Ultimately, the goal is to contribute to a deeper understanding of how organizations can navigate the complexities of digital transformation by integrating traditional and modern management approaches to ensure long-term success.

Literature Review

Evolution of Technology in Business

The evolution of technology in business has shifted from early mechanisation and industrial automation to digitalisation and, more recently, to intelligent, data-driven systems that fundamentally shape organisational

strategy and operations. In industrial contexts, technology primarily enhanced efficiency, reduced costs, and standardised production. Today, however, technologies such as artificial intelligence, cloud computing, and advanced analytics have become central drivers of value creation, innovation, and competitive advantage (Verhoef et al., 2023; Vial, 2020). This reflects a broader transition in which technology is embedded at the core of organisational activity, influencing how firms operate, compete, and evolve.

Recent research emphasises that digital transformation is not a one-off upgrade but an ongoing, iterative, organisation-wide process that continuously reshapes capabilities, business models, and structures (Hanelt et al., 2021; George et al., 2022; Mikalef et al., 2023). Organisations must therefore develop digital dynamic capabilities that enable them to sense opportunities, seize technological advancements, and reconfigure resources in response to uncertainty (Nadkarni & Prügl, 2021). Such capabilities are essential in volatile and complex markets where the pace of change exceeds the capacity of traditional systems.

Technological evolution has also transformed organisational decision-making. The availability of real-time data and advanced analytics has enabled more decentralised, data-driven decision processes, reducing reliance on hierarchical authority. This shift challenges traditional assumptions about organisational design and managerial roles, as decision-making becomes increasingly distributed across levels and functions. Looking ahead, global insights suggest that by 2025, digital integration, automation, and AI-driven decision-making will be deeply embedded across organisational processes, reinforcing the need for continuous structural and managerial adaptation (World Economic Forum, 2024). Thus, technological evolution is not merely enhancing existing practices but fundamentally redefining how organisations are structured and managed in the digital era.

The Rise of e-Commerce

The rise of e-Commerce represents one of the most transformative developments in contemporary business, fundamentally altering how organisations engage with markets, customers, and value creation processes. Initially, e-Commerce emerged as a platform for conducting online transactions, enabling organisations to extend their reach beyond physical boundaries. However, over time, it has evolved into a complex and multifaceted ecosystem that integrates logistics, digital marketing, customer relationship management, and advanced data analytics (Chaffey, 2015). This evolution has shifted the focus from simple transactional

exchanges to continuous, data-driven interactions that enhance customer experience and organisational performance.

In modern e-Commerce environments, organisations operate within highly competitive and rapidly evolving digital marketplaces characterised by platform dominance and network effects. Recent studies indicate that firms must continuously innovate and adapt to meet increasing customer expectations for speed, convenience, and personalisation (Verhoef et al., 2023; Cennamo, 2021). The growing importance of data-driven strategies further highlights that competitive advantage in e-Commerce is increasingly determined by an organisation's ability to collect, analyse, and utilise data effectively (Hänninen et al., 2022;). This reliance on real-time information and digital infrastructure necessitates organisational structures that are flexible, responsive, and capable of supporting rapid decision-making.

Furthermore, the expansion of e-Commerce has intensified global competition, as organisations can now operate across multiple markets simultaneously. This increased connectivity requires firms to coordinate activities across geographically dispersed operations while maintaining efficiency and responsiveness (Hänninen et al., 2022). Projections for 2025 suggest that the continued integration of artificial intelligence and automation will further enhance the capabilities of e-Commerce platforms, enabling more personalised and efficient customer experiences (Dwivedi et al., 2023). However, these developments also place additional demands on organisational structures and management practices, as traditional hierarchical systems may struggle to accommodate the speed and complexity of digital interactions. Consequently, the rise of e-Commerce has not only transformed external market engagement but has also driven significant internal organisational change.

The Emergence of e-Business

While e-Commerce primarily focuses on online transactions, e-Business represents a broader and more comprehensive transformation that encompasses all organisational activities through the integration of digital technologies. e-Business involves the use of digital systems to manage internal operations, supply chains, customer relationships, and strategic decision-making processes, resulting in highly interconnected and data-driven organisational environments (Chaffey, 2015). This transformation extends beyond external market interactions and fundamentally alters how organisations function internally.

Recent literature highlights that e-Business enables organisations to develop integrated digital ecosystems that enhance coordination, efficiency, and innovation (Wessel et al., 2021; Verhoef et al., 2023). By leveraging digital technologies, organisations can streamline processes, reduce operational costs, and improve decision-making through real-time data analysis. More recent studies further emphasise that e-Business transformation is closely linked to organisational agility, as firms must be able to respond quickly to changes in both internal and external environments (Kapoor et al., 2022; Mikalef & Gupta, 2021).

Additionally, the emergence of digital ecosystems has redefined organisational boundaries, shifting value creation from firm-centric models to network-based configurations where multiple actors collaborate and compete within interconnected environments (Jacobides et al., 2021; Kapoor et al., 2022). This shift challenges traditional organisational structures, which were designed for clearly defined roles and boundaries. Instead, organisations must adopt more flexible and collaborative approaches that facilitate interaction across functions, departments, and external partners. As a result, e-Business has become a key driver of organisational transformation, influencing both structural design and managerial practices.

Definition and Explanation of Organisational Structure

Organisational structure refers to the formal system through which roles, responsibilities, authority, and communication are organised within an organisation. Traditional organisational structures are typically hierarchical, characterised by centralised decision-making, clearly defined authority, and formalised rules and procedures (Max Weber, 1947). These structures were developed to ensure efficiency, coordination, and control within stable environments, where tasks were predictable and processes could be standardised.

However, the increasing complexity and dynamism of digital environments have exposed the limitations of such rigid structures. Contemporary organisations must operate in environments characterised by rapid change, technological disruption, and heightened competition, requiring greater flexibility and responsiveness. As a result, recent research suggests a shift towards more decentralised, network-based, and agile organisational structures that enable faster decision-making and enhanced collaboration (Hinings et al., 2022; Verhoef et al., 2023). These emerging “digital organisational forms” are characterised by reduced hierarchical layers, cross-functional teams, and increased autonomy at lower levels of the organisation (Menz et al., 2021).

Importantly, this transformation does not imply the complete abandonment of organisational structure. Instead, it reflects the emergence of hybrid models that combine traditional elements of hierarchy with more flexible and adaptive approaches. Such models aim to balance the need for control and coordination with the demands of agility and innovation (Foss, 2020; Hinings et al., 2022). This suggests that organisational structures are evolving in response to technological change rather than becoming entirely obsolete.

Theories of Management Roles

Traditional theories of management roles have been shaped by classical frameworks that emphasise control, coordination, and supervision within hierarchical organisational structures. One of the most influential contributions is that of Henry Mintzberg (2009), who identified managerial roles as interpersonal, informational, and decisional. These roles reflect the expectations placed on managers in structured environments where authority and responsibility are clearly defined.

However, the digital era has significantly altered the nature of managerial work. Contemporary organisations require managers to operate in environments characterised by rapid technological change, increased complexity, and greater uncertainty. As a result, managerial roles are increasingly shifting from control-oriented functions towards more adaptive and facilitative roles. Recent research highlights that managers are now expected to act as facilitators of innovation, coordinators of digital capabilities, and leaders of organisational change (Nadkarni & Prügl, 2021). This shift reflects the need for managers to support collaboration, encourage experimentation, and enable organisational learning.

Furthermore, post-2021 studies emphasise that effective management in digital environments requires technological literacy, adaptability, and the ability to lead cross-functional and often virtual teams (Hanelt et al., 2021). The integration of artificial intelligence and automation has also reduced the need for routine supervision while increasing the importance of strategic, creative, and ethical decision-making (Raisch & Krakowski, 2021; Dwivedi et al., 2023). Emerging insights suggest that managers will increasingly focus on human–technology collaboration and the orchestration of digital capabilities, further redefining the nature of managerial roles (World Economic Forum, 2024).

Implications for Traditional Models

The combined impact of technological evolution, e-Commerce, and e-Business raises critical questions regarding the continued relevance of traditional organisational structures and management theories. On one hand, the increasing need for agility, innovation, and rapid decision-making challenges the rigidity of hierarchical models and command-and-control leadership approaches (Verhoef et al., 2023; Hinings et al., 2022). Traditional structures, designed for stability and predictability, often struggle to accommodate the speed and complexity of digital environments.

On the other hand, recent research suggests that traditional models are not entirely obsolete but are evolving to fit contemporary contexts. Foundational principles such as coordination, accountability, and strategic alignment remain essential, particularly in large and complex organisations (Foss, 2020; Hinings et al., 2022). Studies from 2022 to 2024 highlight the emergence of hybrid organisational forms that integrate traditional hierarchical elements with more flexible, decentralised, and network-based approaches (Menz et al., 2021).

Critically, the literature indicates that technological advancement does not simply replace traditional organisational models but transforms them. While certain aspects of traditional structures and management roles are becoming less relevant, others continue to evolve and remain integral to organisational effectiveness. This suggests that the claim of obsolescence is not absolute but context-dependent, providing a nuanced and balanced foundation for further analysis in the subsequent sections.

Changing Nature of 21st Century Corporations

Increased Connectivity and Globalization

One of the most defining characteristics of 21st-century corporations is the unprecedented level of global connectivity enabled by rapid advancements in digital technologies. The development of high-speed internet infrastructure, cloud computing, and digital platforms has significantly reduced geographical barriers, allowing organisations to operate seamlessly across national and regional boundaries. As a result, corporations now function within highly interconnected global ecosystems where information, capital, and services flow in real time (Verhoef et al., 2023; George et al., 2022). This increased connectivity has intensified competition while simultaneously enabling new forms of collaboration and value creation within digital ecosystems (Kapoor et al., 2022). However, it also challenges traditional organisational structures, particularly rigid hierarchies that

rely on centralised decision-making, as these are often too slow and inflexible for dynamic digital environments (Nambisan et al., 2019).

A clear illustration of this transformation can be observed in Zappos, an American e-commerce company founded in 1999 and headquartered in Las Vegas, Nevada. Initially established as an online shoe retailer, Zappos expanded into a broader digital retail platform, distinguishing itself through a strong emphasis on customer service and organisational culture (Hsieh, 2010). Its core philosophy, often described as “delivering happiness,” reflects a commitment to customer satisfaction, employee empowerment, and long-term value creation. Operating within a highly responsive digital environment, Zappos recognised the limitations of traditional hierarchical systems and sought to enhance organisational agility and adaptability. This led to the adoption of holacracy, a self-management system that replaces traditional managerial authority with distributed roles and team-based decision-making (Bernstein et al., 2016).

While this approach enabled faster responses to customer needs and supported innovation, it also introduced challenges, including role ambiguity and coordination difficulties, particularly during its early implementation. This highlights an important insight: although digital connectivity and e-commerce environments demand flexibility and decentralisation, the complete removal of hierarchical structures may create new organisational complexities. Consequently, the experience of Zappos demonstrates that technological advancement does not simply eliminate traditional organisational models but instead drives their transformation into more hybrid forms that balance agility with coordination and control.

Shift towards Digital Transformation

A central feature of contemporary corporations is the shift towards digital transformation, which involves not only the adoption of new technologies but also the fundamental reconfiguration of business models, organisational processes, and value creation mechanisms (Vial, 2020; Verhoef et al., 2021). This transformation is continuous and organisation-wide, driven by the growing importance of data as a strategic resource, where firms increasingly rely on real-time analytics, digital platforms, and customer insights to support decision-making and enhance engagement (Hanelt et al., 2021; Mikalef et al., 2023; Dwivedi et al., 2023). As a result, organisations are required to adopt more flexible and adaptive structures capable of responding rapidly to dynamic and complex digital environments. A relevant example is Zappos, which sought to align its organisational design with these digital demands by adopting holacracy, a system that replaces

traditional hierarchical management with distributed roles and self-managed teams (Bernstein et al., 2016). This approach aimed to enhance organisational agility, improve responsiveness to customer needs, and support innovation within a fast-paced e-commerce environment (Hsieh, 2010). However, the transition also revealed challenges, including role ambiguity and coordination difficulties, suggesting that decentralisation alone does not ensure organisational effectiveness (Bernstein et al., 2016).

Therefore, while digital transformation drives the need for more agile and decentralised organisational forms, it does not fully eliminate traditional structures. Instead, it reshapes them, highlighting the need for a balanced approach that integrates flexibility with coordination and control, particularly across different organisational and economic contexts (Verhoef et al., 2023).

Importance of Adaptability and Agility

In an environment characterised by rapid technological change, market uncertainty, and evolving customer expectations, adaptability and agility have become critical organisational capabilities. Contemporary corporations must continuously adjust their strategies, processes, and structures to remain competitive in dynamic and unpredictable environments (Teece, 2018; Warner & Wäger, 2019). Unlike traditional organisations that prioritised stability and efficiency, modern firms must balance efficiency with flexibility and innovation.

Recent research emphasises that organisational agility is essential for sustaining competitive advantage in digital contexts, as it enables firms to respond quickly to emerging opportunities and threats (Mikalef et al., 2023; Svahn et al., 2022). Agile organisations are typically characterised by decentralised decision-making, cross-functional collaboration, and a culture that encourages experimentation and continuous learning, allowing them to adapt rapidly to technological and market changes.

A relevant example is Zappos, which sought to enhance agility by removing traditional hierarchical layers and empowering employees through self-managed teams. This approach aimed to improve responsiveness and innovation within a fast-paced e-commerce environment (Hsieh, 2010; Bernstein et al., 2016). However, the transition also created challenges such as role ambiguity and coordination difficulties, demonstrating that increased flexibility can sometimes lead to organisational fragmentation if not effectively managed.

Therefore, while agility is essential in the digital era, it must be balanced with structure and coordination. This suggests that organisations are not abandoning traditional models entirely but are evolving towards hybrid forms that combine stability with flexibility to operate effectively in complex digital environments.

Obsolescence of Traditional Organisational Structures

Hierarchical Structures vs. Flat Organisations

Traditional organisational structures have historically been hierarchical, characterised by centralised authority, clearly defined roles, and multiple layers of management (Max Weber, 1947). These structures were designed to ensure efficiency, control, and coordination in stable environments where tasks were predictable and processes standardised. However, in the context of digital transformation, such rigid systems are increasingly criticised for limiting responsiveness, slowing decision-making, and constraining innovation (Verhoef et al., 2023; Hinings et al., 2022). Because digital environments require rapid information flow and continuous adaptation, hierarchical structures often struggle to meet these demands, leading organisations to explore alternative models.

In response, many organisations in developed economies are adopting flatter structures that promote agility, decentralisation, and faster decision-making (Svahn et al., 2022). A clear example is Zappos, which introduced holacracy to replace traditional managerial hierarchies with self-managed teams, allowing employees to take greater ownership of decisions and respond more quickly to customer needs (Bernstein et al., 2016). This demonstrates how flattening structures can enhance flexibility and innovation. However, the Zappos case also reveals that removing hierarchy can create challenges such as role ambiguity and coordination difficulties, which may reduce organisational clarity and efficiency if not properly managed. Therefore, while flat structures improve responsiveness, they do not fully eliminate the need for coordination and control.

Furthermore, hierarchical structures remain relevant in many contexts, particularly in developing economies where technological infrastructure, organisational capabilities, and cultural expectations differ (George et al., 2022). In such environments, centralised authority can provide stability, clarity, and effective coordination, especially under conditions of uncertainty and limited resources. This indicates that hierarchical systems are not entirely obsolete but continue to serve important functions depending on context.

Matrix Organisations and Cross-Functional Teams

Matrix structures emerged as a response to the limitations of hierarchy by enabling flexibility through dual reporting lines and cross-functional coordination. While they enhance collaboration across functions, they also introduce complexity and potential conflict in decision-making. In the digital era, organisations are increasingly moving beyond traditional matrix systems towards more dynamic cross-functional teams that operate with greater autonomy and responsiveness (Verhoef et al., 2023; Kapoor et al., 2022). These teams allow organisations to integrate diverse expertise and respond quickly to technological and market changes, making them well-suited to digital environments.

At Zappos, this shift is reflected in its use of flexible “circles” instead of fixed departmental structures, encouraging collaboration and innovation across roles (Bernstein et al., 2016). However, this model also creates coordination challenges, as the absence of clear authority can lead to confusion and inefficiencies. This highlights that while cross-functional structures improve adaptability, they require strong communication and governance mechanisms to function effectively.

In developing economies, organisations often continue to rely on traditional or simplified matrix structures due to limited technological resources and organisational readiness (Mikalef et al., 2023). Without sufficient capabilities, highly decentralised systems may increase inefficiency rather than improve performance. Therefore, while cross-functional and network-based structures represent an important evolution, they do not fully replace traditional models. Instead, organisations are increasingly adopting hybrid approaches that combine the stability of hierarchy with the flexibility of modern structures, ensuring both coordination and adaptability in complex environments.

Decentralisation and Empowerment

Decentralisation and employee empowerment have become increasingly prominent in discussions of modern organisational design, particularly in the context of digital transformation. Traditional organisations were characterised by centralised decision-making, where authority was concentrated at the top levels of management, and employees were expected to follow clearly defined instructions (Fayol, 1949). In contrast, contemporary digital organisations emphasise distributed decision-making, enabling employees at various levels to contribute to organisational outcomes and respond quickly to changing conditions (Warner & Wäger, 2019; Verhoef et al., 2023).

In developed economies, decentralisation is facilitated by digital technologies that enable real-time communication, data sharing, and collaborative decision-making (Svahn et al., 2022). The organisational model adopted by Zappos strongly reflects these principles, as employees are empowered to make decisions within their respective roles without reliance on traditional managerial authority. This approach enhances organisational agility, fosters innovation, and improves responsiveness to customer needs within highly competitive e-Commerce environments.

However, the effectiveness of decentralisation is more limited in developing economies, where organisational cultures often emphasise hierarchical authority and where employees may lack the skills, training, or resources required for autonomous decision-making (George et al., 2022). In such contexts, decentralisation may lead to inconsistencies, reduced accountability, and coordination challenges. Furthermore, even in developed contexts, excessive decentralisation can create role ambiguity and fragmentation, as demonstrated by the challenges experienced by Zappos during its transition to holacracy.

Taken together, these developments suggest that the concept of obsolescence in relation to traditional organisational structures must be understood in a nuanced and context-sensitive manner. While technological advancements in e-Commerce and e-Business have clearly challenged the effectiveness of rigid hierarchical systems, they have not rendered traditional structures entirely irrelevant. Instead, they have driven a process of transformation in which organisations increasingly adopt hybrid models that combine elements of hierarchy, flexibility, and decentralisation. This evolution reflects the need to balance stability and control with adaptability and innovation in an increasingly complex and dynamic digital environment.

Redefining Management Roles

Transformational Leadership

The rapid advancement of e-Commerce and e-Business has significantly reshaped the expectations placed on managers, shifting the emphasis from traditional supervisory roles towards more dynamic, adaptive, and transformational forms of leadership. Managers were expected to plan, organise, direct, and control organisational activities in structured and predictable environments, where stability and efficiency were prioritised. Similarly, early leadership perspectives were closely aligned with transactional approaches, where compliance and performance were achieved through formal authority and reward-based systems. However,

in contemporary digital contexts characterised by uncertainty, rapid technological change, and continuous innovation, such control-oriented and rigid leadership approaches are increasingly insufficient.

In response to these changing conditions, transformational leadership has emerged as a critical capability for modern organisations. Originally conceptualised by James MacGregor Burns (1978) and later developed by Bernard Bass (1985), transformational leadership emphasises the role of leaders in inspiring, empowering, and enabling employees to transcend routine expectations and actively contribute to organisational innovation and change. Unlike traditional leadership styles, which focus on supervision and control, transformational leadership is rooted in vision, motivation, and the development of organisational culture. Leaders are expected not only to guide performance but to shape meaning, build trust, and foster commitment among employees.

This shift is particularly relevant in digital environments, where organisations must continuously adapt to evolving technologies and market conditions. Recent research highlights that transformational leaders play a central role in facilitating digital transformation by creating cultures that support experimentation, learning, and adaptability (Hanelt et al., 2021; Svahn et al., 2022; Nadkarni & Prügl, 2021). In such contexts, leadership extends beyond directing tasks to enabling innovation, coordinating knowledge, and managing organisational change. Furthermore, contemporary leadership thinking, including the work of Ronald Heifetz (1994), reinforces the importance of adaptive leadership, where leaders must help organisations navigate complex and uncertain environments by encouraging collective problem-solving and continuous learning.

The experience of Zappos provides a compelling illustration of this transformation in practice. Through its adoption of holacracy, Zappos significantly reduced traditional managerial authority and redistributed leadership responsibilities across self-managed teams. In this system, leadership is no longer tied to formal positions but is embedded within roles and collective decision-making processes. Managers are expected to act as facilitators, coordinators, and enablers rather than controllers, emphasising collaboration, accountability, and shared ownership. This reflects a broader shift towards distributed and participative leadership models, which align closely with transformational and adaptive leadership principles. The emphasis on empowerment and autonomy within Zappos highlights how leadership is evolving in response to the demands of digital and highly dynamic environments.

However, the transition towards transformational and distributed leadership is not without its challenges. In developing economies, where organisational cultures often emphasise hierarchy, authority, and clear lines of command, the adoption of such leadership styles may be constrained (George et al., 2022). Employees in these contexts may expect directive guidance and may find decentralised leadership structures unfamiliar or even destabilising. Moreover, limited access to training and leadership development opportunities can further restrict the effective implementation of transformational leadership practices.

Even within developed economies, the experience of Zappos demonstrates that excessive decentralisation of leadership can lead to role ambiguity, coordination difficulties, and resistance from employees accustomed to more structured organisational systems. This reflects a broader tension within contemporary leadership theory: while transformational leadership promotes flexibility and empowerment, organisations still require a degree of structure, clarity, and accountability to function effectively. As noted in more recent leadership discussions, including complexity leadership theory (Uhl-Bien et al., 2007), effective leadership in modern organisations often involves balancing enabling leadership with administrative control.

Consequently, while transformational leadership represents a significant evolution in managerial roles within the digital era, it does not fully replace traditional leadership approaches. Instead, it complements and reshapes them. The emerging trend is towards hybrid leadership models that integrate transformational, adaptive, and traditional elements, allowing organisations to balance innovation with stability. This suggests that leadership, much like organisational structure, is not becoming obsolete but is evolving in response to technological and contextual demands.

Embracing Technological Literacy

Alongside the shift towards transformational leadership, another critical dimension of redefining management roles is the growing importance of technological literacy. In traditional organisational settings, managers were not required to possess deep technological expertise, as technology functioned primarily as a supporting tool for operational activities. However, in the context of digital transformation, technology has become central to organisational strategy, decision-making, and value creation (Verhoef et al., 2023). As a result, managers are increasingly expected to understand and engage with technological systems in order to lead effectively.

Recent research emphasises that digital competencies are essential for contemporary management. Managers must develop an understanding of data analytics, digital platforms, and emerging technologies

such as artificial intelligence in order to make informed decisions and drive organisational innovation (Nadkarni & Prügl, 2021; Dwivedi et al., 2023). Technologically literate managers are better positioned to interpret complex data, identify strategic opportunities, and align organisational resources with digital initiatives (Mikalef et al., 2023). This shift reflects a broader transformation in which managerial effectiveness is increasingly linked to the ability to integrate technological knowledge with strategic thinking.

At Zappos, technological literacy is embedded within the organisational culture, as employees and leaders operate within a highly digitalised e-Commerce environment. Decision-making processes rely heavily on data and customer insights, requiring managers to interpret and utilise digital information effectively. This integration of technology into everyday organisational practices illustrates how managerial roles are evolving to incorporate both technical and strategic dimensions.

However, the growing emphasis on technological literacy also presents significant challenges, particularly in developing economies. Limited access to advanced technologies, skill shortages, and inadequate training infrastructure can hinder the ability of managers to adapt to digital environments (World Economic Forum, 2024). In such contexts, traditional management practices may persist not because they are inherently more effective, but because organisations lack the resources and capabilities required to transition to digitally enabled systems. This highlights an important limitation in the argument that technological advancements render traditional management roles obsolete.

these developments illustrate that the nature of management roles is undergoing a significant transformation in response to technological change. Managers are increasingly required to combine traditional responsibilities—such as coordination and control—with new capabilities related to leadership, innovation, and technological integration. The case of Zappos demonstrates how organisations can experiment with new approaches to leadership and management in order to enhance agility and responsiveness.

However, the evidence also suggests that these changes are not universally applicable. Differences between developed and developing economies, as well as organisational and cultural contexts, influence how management roles evolve. Consequently, rather than rendering traditional management theories obsolete, technological advancements are reshaping and redefining them. The emerging trend is towards hybrid managerial roles that integrate elements of traditional authority with the flexibility, collaboration, and technological competence required in the digital era.

Challenges and Opportunities

Overcoming Resistance to Change

One of the most significant hurdles to digital transformation is resistance to change. Because traditional structures and management practices are often deeply woven into an organization's culture, moving toward flexible, decentralized systems is inherently complex (Hanelt et al., 2021). Employees may resist these shifts due to uncertainty, fear of job loss, or a perceived lack of control (George et al., 2022). This resistance is more than just a behavioral reaction; it reflects deep-seated cultural and institutional dynamics that dictate how change is accepted or rejected in different contexts.

In developed economies, resistance persists even when employees are accustomed to digital environments, especially when transformation disrupts established authority and routines. A primary challenge here is structural disruption, where shifting power dynamics create uncertainty for both staff and middle management. Furthermore, organizations often grapple with change fatigue—a state where continuous innovation leads to disengagement—and a growing mismatch between existing skills and the demands of a collaborative, decentralized workplace. The case of Zappos illustrates this clearly: its transition to "holacracy" caused significant role ambiguity and employee departures, proving that even tech-forward firms can struggle with the loss of professional identity and organizational norms. Recent studies similarly show that digital restructuring often triggers identity tensions and resistance, even in digitally mature contexts (Tarafdar et al., 2023).

In contrast, resistance in developing economies is often more structurally embedded. Beyond behavioral issues, organizations face limited infrastructure, low digital literacy, and restricted access to training (World Economic Forum, 2024). Significant skill gaps and financial constraints further hinder investment in digital initiatives. Cultural factors also play a vital role; strong hierarchical traditions can make participative models difficult to implement, as employees may view automation as a direct threat to job security. Consequently, leadership in these regions often remains authority-driven rather than transformational, making it harder to guide employees through the transition.

The pace of change also creates a distinct imbalance. In developed nations, the speed of transformation often exceeds organizational readiness, causing stress and friction. Conversely, organizations in developing nations may suffer from slow adoption due to resource scarcity, leading to reduced global competitiveness.

This suggests that the real challenge lies in aligning the speed of digital shifts with an organization's actual capabilities.

Ultimately, resistance should be viewed as a valuable indicator of readiness rather than a mere barrier. Organizations that address these concerns through supportive leadership and continuous training can foster a culture of resilience. Successful transformation is rarely achieved through abrupt replacement; instead, it requires context-sensitive adaptation. This reinforces the argument that technological advancement does not make traditional structures obsolete, but rather necessitates their gradual evolution to reflect local cultural and economic realities.

Ensuring Data Security and Privacy

The heavy reliance on digital technologies in e-commerce has made data security and privacy central concerns. As organizations process vast amounts of data, they face escalating risks from cyber threats and regulatory demands (Dwivedi et al., 2023). While data is a strategic asset for decision-making, it is also a major vulnerability, creating a complex landscape where opportunity and risk are inextricably linked.

In developed economies, organizations operate within mature regulatory frameworks and benefit from advanced security infrastructure. High customer expectations for privacy force firms to invest heavily in compliance and risk management to maintain trust (Verhoef et al., 2023). However, even these firms face hurdles, such as the increasing sophistication of cyberattacks, the high cost of protection, and a shortage of specialized talent. Furthermore, strict regulations can sometimes slow down digital experimentation, creating a tension between innovation and compliance.

In contrast, these challenges are often more severe in developing economies due to weaker regulations and limited infrastructure (George et al., 2022). Many organizations lack the financial resources and skilled workforce needed to manage complex digital systems. When combined with inconsistent enforcement and low institutional awareness, these vulnerabilities can undermine customer trust and hinder the adoption of e-commerce.

For a digital-first company like Zappos, security is a cornerstone of competitive advantage. It must constantly invest in secure systems while ensuring that these protections do not interfere with a seamless, personalized

customer experience. This highlights the modern organizational struggle: balancing the efficiency of new tech with the uncertainty of new risks.

Ultimately, effective security is not just a technical task; it requires strategic governance and a culture of accountability. Whether in developed or developing contexts, organizations must embed security awareness into their everyday leadership. This reality reinforces the idea that technology does not eliminate traditional principles like control and risk management; instead, it transforms them, requiring firms to integrate these core values into increasingly complex digital environments.

Leveraging Technology for Competitive Advantage

Despite the challenges outlined above, technological advancements in e-Commerce and e-Business create substantial opportunities for organisations to achieve and sustain competitive advantage. Digital technologies enable firms to enhance operational efficiency, improve customer engagement, and develop innovative business models that differentiate them in increasingly competitive and dynamic markets (Verhoef et al., 2023; Mikalef et al., 2023). Beyond efficiency gains, these technologies allow organisations to reconfigure how value is created and delivered, shifting from product-centric models to platform-based and service-oriented ecosystems. As such, the ability to strategically leverage digital technologies has become a critical determinant of organisational success in the digital era, influencing not only performance outcomes but also long-term strategic positioning.

In developed economies, organisations are generally better positioned to exploit these opportunities due to access to advanced technologies, highly skilled human resources, and supportive institutional and regulatory environments. These firms benefit from mature digital infrastructures, strong innovation ecosystems, and access to capital, all of which enable them to experiment with and scale new digital initiatives. The case of Zappos demonstrates how digital capabilities can be strategically integrated to deliver superior customer experiences, streamline operations, and enhance organisational agility. By embedding technology not only within operational processes but also within organisational design, Zappos has been able to create a distinctive and adaptive business model within the highly competitive e-Commerce landscape. However, even in developed contexts, organisations face ongoing challenges in maintaining competitive advantage, including rapidly evolving technologies, increasing competitive pressures, and the need for continuous

innovation. This highlights that technological advantage is not static but requires sustained investment and strategic alignment.

In contrast, organisations in developing economies often face significant constraints that limit their ability to fully leverage technological opportunities. Limited access to advanced technologies, inadequate digital infrastructure, skill shortages, and financial constraints can hinder the effective implementation of digital transformation initiatives (World Economic Forum, 2024). In addition, weaker institutional frameworks and regulatory systems may reduce investor confidence and slow technological adoption. As a result, many organisations in these contexts continue to rely on traditional business models and management practices, focusing on operational efficiency and cost reduction rather than innovation-driven growth. Furthermore, leadership capability plays a critical role, as organisations may lack the strategic vision and digital expertise required to fully exploit emerging technological opportunities.

Nevertheless, technological advancement also offers significant potential for developing economies to “leapfrog” traditional stages of development by adopting digital solutions directly, bypassing legacy systems (Mikalef et al., 2023). This creates opportunities for organisations to innovate rapidly and compete on a global scale, particularly in sectors where digital platforms reduce entry barriers. However, the realisation of these opportunities is highly contingent on factors such as investment capacity, workforce skills, and institutional support. Without these enabling conditions, the benefits of digital transformation may remain unevenly distributed, potentially widening the gap between technologically advanced and less developed organisations.

Another important dimension relates to the role of digital ecosystems and platform economies in shaping competitive advantage. In both developed and developing contexts, organisations increasingly compete not as isolated entities but as part of interconnected networks involving suppliers, partners, and customers. This shift requires organisations to develop capabilities in collaboration, data sharing, and ecosystem orchestration. However, participation in such ecosystems often favours organisations with stronger technological and financial resources, further reinforcing existing inequalities between developed and developing markets.

Taken together, these developments suggest that technological advancements do not produce uniform outcomes across organisations but instead create a complex landscape of opportunities and constraints

shaped by contextual factors. While digital technologies can significantly enhance competitiveness, innovation, and organisational performance, their impact varies depending on the organisation's ability to access, integrate, and strategically utilise these technologies. Consequently, rather than rendering traditional organisational structures and management roles obsolete, technological change is reshaping and adapting them. Organisations are increasingly required to combine traditional principles of coordination, control, and strategic alignment with new capabilities related to innovation, agility, and digital integration, resulting in the emergence of hybrid organisational models suited to the complexities of the modern digital economy.

Conclusion

This study evaluated whether technological advances in e-commerce and e-business have rendered traditional organisational structures and management theories obsolete. The analysis shows that while digital transformation has significantly reshaped business practices, claims of complete obsolescence are overly simplistic. Instead, technological change has introduced new priorities centred on agility and continuous innovation. These shifts challenge rigid hierarchies, as illustrated by Zappos, where organisations adopt flatter structures and redefine managerial roles towards facilitation and empowerment.

However, traditional theories are not being replaced but are evolving. A comparison between developed and developing economies shows that adoption of new organisational forms is context-dependent. Firms in developed settings tend to favour decentralisation due to stronger digital capabilities, whereas organisations in developing contexts often retain hierarchical structures due to resource and cultural factors. Ongoing challenges such as resistance to change and data security concerns further highlight the continued importance of coordination, accountability, and strategic alignment. This suggests the emergence of hybrid organisational models that balance stability with flexibility.

These findings also point to key areas for future research. More empirical studies are needed to examine digital transformation across different contexts, particularly in developing economies. In addition, longitudinal research is required to assess the long-term effectiveness of models such as those used by Zappos. As digital technologies continue to evolve, further research should explore their impact on leadership and human–technology interaction, as well as how hybrid organisational models can support sustainable performance in complex environments.

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