

The Adjustment Path of Enterprise Organizational Structure in the Context of Digital Transformation

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Abstract. This paper investigates the realignment of enterprise organizational structures within the context of digital transformation (DT). Recognizing the limitations of traditional hierarchical models in accommodating the velocity and dynamism of contemporary technological advancements, and the increasing demand for customer-centricity, this research explores the process by which enterprises can transition towards more agile and adaptive organizational frameworks. Through a synthesis of existing literature and illustrative case analysis, this study identifies critical impediments to successful digital adaptation, including organizational inertia, digital skills deficits, and sub-optimal technology investment. This paper proposes actionable strategies, such as cultivating a pervasive digital culture, incentivizing cross-functional collaboration, and implementing agile methodologies, to mitigate these challenges and ensure sustained competitiveness, resilience, and progressive evolution. The findings underscore the imperative of aligning organizational architecture with digital strategic objectives to optimize performance in the emergent digital ecosystem. This study contributes to the extant body of knowledge by providing nuanced insights into the structural and organizational adaptations necessary for established businesses to thrive in the face of accelerating digital disruption, offering a pragmatic roadmap for organizations seeking to navigate this complex and evolving landscape.

Keywords: Enterprise organizational structure; digital transformation; adjustment path.

1. Introduction

Digital transformation means enterprise design new business processes, organizational structures, and business models, thereby enabling them to achieve finance growth and competitive advantage. Digital transformation is not just about technological application, but also a combination of transformation on strategy and culture. With the widespread use of the Internet and updates of information technology, companies are paying attention to digital updates. Either it is from the traditional Information Technology (IT) configuration or the intelligent factory and automated process, the digital update has become the main engine for the company to maintain its vitality and growth.

Digital transformation has become an essential measure that enterprises must adopt strategic measures to survive and succeed in a highly competitive environment [1]. At present, DT is quickly spreading and transforming people's lifecycles of the public and private economy sectors. IoT, big data, cloud and AI technology, as the essential technologies for DT, are gradually transforming enterprise organizational strategies and models in all industries. Due to the unprecedented acceleration of DT, especially, in recent, especially, following the outbreak of COVID-19, the constraints of current management ideas have been manifested. Companies who are afraid of new trends are facing the fact that they have harder and harder times to solve upcoming economic pressures, causing a disadvantage in competition and market loss.

Hence, Digital transformation has become a key strategic imperative for companies in order to keep and/or improve their position on the value pyramid. Because it's not only about implementing technology, but it also has a profound impact on organizations' structure, management and actually the way business adds and delivers value. DT requires organizations to move away from the traditional, hierarchical business models toward a new customer-centered business, dynamic and innovative one. Technology is not the sole benefit from applying DT to organization reorganization and management.

The digital transformation refers to a fundamental change in the company's organizational architecture, culture and management leadership beyond technology, entails thorough research and analysis of existing business flows and processes, evaluating potential effects and risks and determining accurate and targeted routes to achieve the transformations. The aim is to foster organizations that are not only more innovative, more resilient, but capable of bringing sustainable growth and long-term success in an uncertain and even harsh global environment. Digital Transformation contributes to Organizations being more innovative and able to succeed for long periods. Through this background, in this paper, the adjustment path of enterprise organization structure under background of digital transformation is studied.

2. The Organizational Structure Impact brought about by Digital Transformation

Typical organizational frameworks include the functional system, characterized by independent department such as finance, marketing, and production; the divisional structure, which is divided based on products or markets segments. And the matrix system, which promotes cooperation across functions and projects. These structures emphasize clearly defined responsibilities, well-structured management hierarchies, and are suitable for stable developmental environments.

This organizational division mode is characterized by good responsibility, controllability, and operational efficiency and has strong manageability. It is more appropriate for large and relatively stationary enterprises. It is helpful to effectively divide responsibilities and increase work effectiveness and provide unified management. This organizational mode is conducive to the coordination and unification of departments' work and maintains relative stability of the company's operation. It suits especially for complex and big-scale enterprises, which improves the management and efficiency of enterprises.

However, in classical enterprise development theory, the firm serves as the primary unit of industry structure and is considered an organization with well-defined boundaries [2]. The dynamic nature of today's market causes companies to face challenges, for example, slow response times, complex procedures, and difficult innovation, which substantially reduce their responsiveness and innovative capacity. Although integrating multiple strategies offers advantages in dynamic environments, the increasing dominance of digital technologies gradually reduces the competitive advantage that traditional strategic orientations can provide, whether used alone or in combination, previously offered [3].

Due to the new technologies, DT encourages enterprises to narrow down the management levels and construct horizontal structure and facilitates information transmission and effective decision making. The operation can facilitate the enterprise to enhance its flexibility and accelerate its innovation. The enterprise can transform the internal communication and operation to reduce the link in the organizational structure through designing effective communication channels and making optimization of procedures, so as to improve its response ability to the market by responding rapidly and flexibly changing the strategies to maintain the competition. Moreover, flat structure can foster staff autonomy and imagination and build a team atmosphere and innovative corporate spirit.

Moreover, technology tools are the essential tool in implementation of this organizational change. The use of data sharing and cloud platforms remove departmental walls, support collaboration and cross-function teamwork. This shift results in the more project-based and teamwork organizational forms enhancing operation performance and decreasing the management cost [4]. By means of remote collaborating software such as Zoom and Teams, real time information sharing can promote the digitization transformation. In addition, with the support of the platform such as the driver sharing service of Didi, unnecessary capital investment could be decreased, the resources can be matched less, innovation can be increased, productivities can be boosted, thus making the turnover rate of traditional enterprises operating capital increase.

This technology enables a more unified and agile context of work by means of instantaneous information and AI-based decision models that allow an instant flow of communication in the organization. Effective communication about the flows can create agility within the organization so that companies can make immediate responses based on these signals. Businesses will be able to decrease risk, enhance operational effectiveness and enhance competitiveness, thus increasing the prospects of long-term sustainability via the use of the data they currently own.

In addition, digital transformation has optimized the labor structure in real economy companies. Technological advancements in digital transformation accelerate changes in workforce composition, leading to the replacement of low-skilled labor) and causing polarization in employment strategy, which can have disruptive impact on employment in real economy enterprises [5-7]. It is characterized by the expansion of low-tech sectors through automation, while changes driven by digitalization and intelligence create new jobs in high-tech sectors [8]. Furthermore, job roles are transitioning from single-function positions to multi-skilled composite positions. New roles such as data analysts and digital marketing experts have promoted employees to continuously learn new skills. Many real economy firms replace routine tasks with industrial robots, using employees with lower educational backgrounds for simple, repetitive work, while the deployment of industrial robots, intelligent assembly lines, and other equipment increases demand for high level talent [8,9]. Even though digital transformation provides substantial advantages for companies, achieving it will require many challenges.

3. The Main Challenges in Digital Transformation

However, for firms, there are a large number of issues and constraints associated with DT, as identified in the research related to digital skills and technological deployment [10]. First, Digital skills shortage as a constraint to competitiveness. A skilled professional shortage for businesses to hire or train skilled professionals with High technical expertise, which causes constrains to innovation and T&D adoption. Furthermore, the lack of digital mentality also means many staff are reluctant to change their mindsets when markets move quickly and technology keeps updated. Such training expenses, therefore, become an economic burden to enterprises which hinder them in undergoing a shift to DT.

The traditional level control and homogeneous procedure are clearly not enough as people demand a rapid cycle and agility in the development processes today. For customized products and services, the firms must enhance their agility and responsiveness as well as being constantly reducing their product launch time [11]. Companies may develop a digital first culture. However, such shifts to more flexible frameworks often meet organizational blockades, particularly in organizations that traditionally emphasize stability and control which were found that a lack of digital culture on the part of top management teams was among the most troublesome difficulty of business transformation [12]. In general, managers possessing the skills and experience in digital are more likely able to embrace the nonstop innovation required for digital transformation [13].

Second, digital change calls for huge amounts of money. The expense of purchasing new applications, system, employee training, and maintenance is prohibitive [14]. A lot of companies could not afford it. Meanwhile, a higher reliance on new technologies increases the risks of applying technology and data safety issues. Cybersecurity incidents such as, but not limited to, business disruptions from unstable or insecure systems, can generate economic impact and reputational damage. Data breaches and system failure are enormous risks illustrating the importance of comprehensive cybersecurity.

Opposition by employees is also an important obstacle [14]. Most employees in a team may resist the change of new technologies and workflows due to job security, additional work or unfamiliarity. Their opposition may impose pressure, team environment and motivation, and future vision. Also, change uncertainty causing workers' concern on the future may lead to increased turnover, less motivation and lower performance leading to disruption of transformation processes.

In summary, Vogelsang identify three principles regarding the achievement of digital transformation goals. First, an adaptable and agile organization is essential to digital transformation [15]. The organization has enhanced innovation, technological skills, and assets. The greater the organization's adaptability, the more likely the effectiveness of digital transformation. Second, the external environment also influences DT success. Enterprises need to cooperate to create enhanced supply chains for digital transformation. Third, technology is technology that plays a key role in DT. Lacking secure and reliable digital innovations, digital transformation is ineffective. However, focusing solely on technology is not enough to draw benefits from digital transformation.

4. Applications and Strategies

Firms should consider digital transformation from the perspective of the unison of approaches and the feasible measures [16]. Firstly, structure reorganization through a flattening of organizational structure and project management enhances interdepartmental collaboration. For example, building multi-disciplined teams breaks the boundary of traditional structure to promote effective communication and fast decision making. At the same time, the more adaptable methodologies of project management enable businesses to more easily manage and adjust to changes in the market or demand by customers and motivate creative thinking and improve organizational flexibility to ensure competitiveness in the digital economy.

Additionally, talent development investments are imperative. Enhancing internal technical skills by investing in specific educational training courses makes sure that employees have the necessary competences to respond to the new technologies and the workflows. Based on some research that the limited know-how in the manufacturing sectors is the key problem that hinders firms from reaching Industry 4.0 in Sweden [17,18]. Consequently, people need to build a strong talent chain that, for instance, means maintaining systematic development and retention of talents through coaching and career roadmaps. Similarly, hiring specialist talents in emerging and in-demand technologies (e.g., artificial intelligence or machine learning or cloud computing) could be valuable for developing digital strategies and achieving the efficient adoption of digital solutions in the organizations.

Similarly, setting up new, open and learning corporation culture is of major importance. The organization has to promote and respect the spirit of experiment, failing, but trying again. Rewarding attempts at innovation encourage workers to get involved with digital change. Development of learning and open attitudes mitigate the fear of the unknown and enhance, across the entire organization, the feeling of acceptance of change. Managers are responsible for directing this culture through vision, communication, and a clear dedication to digital change.

From technological aspect, Firms need to require a robust digital foundation. According to cloud platform, allow for modular and convenient methods of computation resource, data storage and deployment of applications. Big data platforms can allow an organization to make sense of their big amount of data for strategical making device can be deployed to capture real-time operational information to enhance the process capability, enable a predictive maintenance. Properly integration of these into core business processes to offer a firm basis for ongoing digital processes.

Finally, the changing management plan must be implemented with succession planning and leadership team to ensure smooth transition and accountability. Executives may be handled to address any anxiety about job insecurity and uncertainty. In general, managers need to know what the employees say and be there through transition time; they need to inspire their groups to learn and use different flows and sets of tools. DT should be conceived holistically, including the elements of digital technology, organization design, talent management, and change management to provide the fertile conditions for sustainable digitalization.

5. Case Analysis: Walmart's Digital Transformation Practice

Due to the outbreak of COVID-19, digital technology has been widely adopted at a higher speed, particularly by retailers like Walmart, an old traditional retail giant, which has been strongly encouraging digital transformation in response to the rise up of fierce competition. Walmart shifts from an industry-centric (product-centric) to consumer-centric (“Internet +”) business model.

Walmart places great effort in e-commerce. To facilitate online shopping, Walmart grows its online shopping platform Walmart.com, refines its discovery and recommender systems, enriches its app’s capabilities on the mobile devices, and provides multiple means of delivery including pick-up in stores and same-day deliveries.

Walmart is coalescing the digital retail platform with physical retail platform. Walmart uses its physical stores to offer in-store pickup services so that customers can complete their online purchase and can receive that physical delivery at their local Walmart Store by taking the “pickup” service. Integration can save their time and avoid their package’s shipping. Additionally, it has the function of inventory checking. The customers can know whether the products are available or not in the physical store by searching. It shortens their shopping time.

Walmart is escalating its efforts in tech investment. Take the usage of AI in the company’s supply chain to predict demand and optimal inventory allocation, which would avoid overstocking and stockout. Walmart also tests blockchain tech in food safety tracking.

Lastly, Walmart is strengthening its membership program. Walmart membership program includes free unlimited deliveries, fuel rewards, as well as private discounts for members, whose goal is to foster customer stickiness and retention. Walmart’ FY 2025 Annual Report mentioned that Walmart U.S. e-commerce sales increase at 27% year over year, with more than 60% of e-commerce orders delivered from store networks. In addition, members in Walmart+ keep increasing, and members with a high purchase frequency and average purchase amount than non-members. Year over year, revenue from membership increased by \$21%. Through the successful digital transformation, revenue grew significantly.

6. Conclusion

The goal of this paper is to develop a holistic understanding of the consequences of digital transformation on the structure of the firm, traditional businesses, and related major strategic challenges and organizational challenges that these businesses face to transform into a digital era. It would investigate how DT permeates from the level of making decisions to coordinating between departments, aiming to take an end-to-end approach toward giving insights into how the traditional enterprises could effectively make use of digital tools and policies to grow in the era of digitalization.

Finally, the authors conclude that the impact of DTs on industrial firms is far more complex and bidirectional than a merely substitutionary or complementarity role and that such changes are critical for their long-term sustainable and competitive benefits. Such dynamics clearly require a shift from a classic tall hierarchical organization to a flatter structure, allowing for rapid reactivity to market changes and customers’ needs. Digital technologies, such as AI, cloud computing, and data analytics, and their combination to further optimize processes, drive innovation and foster collaborative environments, are vital for increasing efficiency. Yet, digital transformation is fraught with difficulties as the skills to fill digital talent gaps, complacency in a culture that has to change, and the financial investment are significant headwinds to overcome. People strategies, culture change, and the allocation of resources can address these frictions. Implementing effective change management strategies, fostering a culture of learning, and investing in skills development for workers are crucial to overcoming change resistance and optimizing the implementation of digital tools.

Furthermore, the paper emphasizes the crucial role that cybersecurity and data governance play in increasing reliance on digital systems. The risks of system failure and data breach should not be underestimated and should be balanced by sophisticated security measures and anticipation to ensure, ex ante, adequate risk management. Ultimately, a consistent process of digital transformation is a

necessary solution that requires technology, organization, talent, and culture to work in synergy. With technological innovation as a strategy and adaptability, traditional businesses can drive digital transformation to enhance competitiveness, foster long-term development, and achieve prosperity in the current digital economy. The applications and tactics outlined here provide a roadmap for companies to navigate this complex terrain, with a special emphasis on lifelong learning, experimentation, and investing in the development of a digital-first culture.

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