The Impact of Digital Transformation Strategy in Organisations

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Abstract

The digital transformation phenomenon always tends to be complicated, ambiguous, challenging, and nonroutine managerial tasks for organisations. The success rate of such digital transformation is very low due to rapid changes in technologies. Digital transformation through these technologies demand fundamental change in organisation processes, technology, and behaviour of the people. This broad change results in different socio-technical issues and challenges. The proactive strategy regarding people, process, technology, and most importantly their alignment in the organisation is found critical in executing such transformation initiative in the organisation. The planned efforts regarding knowledge management also plays an important role in executing and sustaining such transformation initiatives in the organisations. Moreover, value creation, operational efficiency, competitive advantage, customer relationship, and new business model emerges as a vital motivational factor and outcome for digital transformation. This paper aims to examine the impact of resource capability, process capabilities and cultural capability on successful digital transformation. The objective of this study is to get familiar with potential issues and challenges allied to digital transformation that organisations can face and how such problems and challenges can be addressed by business and IT organisations. Along with various difficulties and challenges, we need to explore digital transformation impacts and benefits, which create motivation for the management to transform their organisation digitally.

Keywords: Digital transformation, digital transformation issues and challenges, digital transformation impact and benefits.

Introduction

In the literature review, researchers view organisational survival depends upon digital technology transformation capabilities (Ashurst & Hodges, 2010; Berghaus, 2018). Digital Technology Transformation (DTT) is occurring at a rapid pace in public and private organisations due to disruption in market conditions along with deficiencies in organisation needs and processes. It becomes a fundamental market need for the survival of the organisations. According to Pflaum & Golzer (2018), in recent decades digital transformation, through new workplace technologies, has emerged as the fourth industrial revolution. Kenny et al. (2015) pointed out the need for transformation arises due to societal, industrial, and mostly because of technological advancements. This broad change asserts different socio-technical issues and challenges, which creates hurdles in a successful transformation project (Khan & Bokhari, 2018; Mahmood et al., 2019). Researchers, experts, and practitioners have recognised that transformation is a complex process in terms of people, process, making it challenging task (Higgs & Rowland, 2005). Prior research shows the high failure rate of digital transformation projects. McKinsey highlights the 70% transformation failure projects (Bucy et

al., 2015), which demonstrate that most organisations lack this competency (Gobble, 2018). How to accomplish digital technology transformation is one of the challenging tasks for the senior management of organisations.

The potentials for business value generation through digital technology transformation is promising, and worst still digital transformation initiatives are failing. In 2019 alone, according to International Data Corporation (IDC) estimate, spending on digital transformation will exceed the earlier projections of US$2 trillion to about US$3.8 trillion, of which spending on digital transformation technologies will account for 40 percent of all IT spending (Ferranti, 2019). Hence, investment in IT continues to represent a significant proportion of capital outlay, adding another layer of difficulty to the already existing organisational hurdles in making a case for investment in transformational technologies.

Organisations can rarely exercise choice not to invest substantially in Information Technology (IT), even when by the dominant econometric appraisal standards, they struggle to find demonstrable bottom-line justification. To avoid being disrupted by nimbler competitors, companies are innovating and reinventing themselves at a faster rate than ever and experimenting with new digital services and capabilities to augment their existing offerings or to slide into adjacent markets. It is hard today to find an enterprise that is not leveraging some combination of cloud, analytics, artificial intelligence, and machine learning to serve customers better or streamline operations. So that, in response to the changing business environment, some businesses for strategic reasons continue to make considerable investments in digitisation.

What is digital transformation?

The term digital transformation is one of the most prevalent perspectives among consultants, managers, and researchers from the past few years. Digitisation and digitalisation are two terms that are closely associated, but both have different concepts. Digitisation is the automation of previously established manual and paper-based work processes from analogy artefact to digital format. Digitalisation has a broader concept and refers to the use of digital technologies to develop a new business process to create customer value (Berghaus, 2018; Gobble, 2018).
Consequently, the digital transformation relates to digitalisation, where organisation transformation is initiated by technological advances headed for enhancement in an organisational business process and delivers value to the customers (Fitzgerald et al., 2014).
Digital transformation covers a huge number of processes, interactions, transactions, technological evolutions, changes, internal and external factors, and industries. Once reading advice on digital transformation or reading reports and predictions it's essential to keep this in mind. Although there are common challenges, goals and traits in organisations across the globe, there are also enormous differences per industry, region and organisation.

Research methodology

Different databases are targeted for the collection of data regarding digital transformation. Diverse resources have increased the quality and projected the different perspectives from authors on similar issues. The following databases are selected:
• Science Direct
• Springer Link
• Institute of Electrical & Electronics Engineers (IEEE)
• Emerald

• JSTOR
• Google Scholar
• ProQuest (for dissertations)

To execute the current literature review, backward searching technique is also adopted for the identification of further research articles covering DT issues, challenges, and impacts. This study applies a backward search technique on more recently published articles. Relevant search strings and keywords for searching articles in lieu of current digital research are as follows;

• "Digital Transformation"
• "Digital Organisational Transformation"
• "Digital Transformation Problems"
• "Digital Transformation Issues"
• "Digital Transformation Challenges"
• "Digital Transformation Failure"
• "Digital Transformation Issues & Challenges"
• "Digital Transformation Impacts"
• "Digital Transformation Benefits"

Digital business transformation and value realisation

With the positive results coming out of digital business transformation efforts in recent times, the business value of information technology (BVIT) researchers have reasons, supposedly, to move the discussion on IT business value from the attempt to correlate a linear relationship between IT spend and the organisations financial performance as the sole success parameter, to the acknowledgment of various ways which IT is expected to support businesses today. Instead, technology business management (TBM) and IT business alignment models are back in the discussion. This is because, paradoxically speaking, digitisation is failing at a time of quantum leap in technological innovations, and the hope on digitalisation to transform business fading. According to Capgemini Digital Mastery survey (2018), many organisations are starting to face the realities of the complexities of their digitisation journeys and realizing how challenging successful digital business transformation can be. The research also revealed that governance, skills, and culture are among the major challenges that stand in the way of digital transformation success. The same challenges have trailed all past efforts at digital enablement of business.

While most of the investments are geared towards technology acquisition that promise to provide the enterprise a market edge against its rivals or enhanced operational efficiency that will exponentially lead to cost reduction, little attention is given to cultural changes and human capital development of the change. The problem with digital business transformation relates less to technology and more to the management of the organisational challenges created by a technological shift. This accounts for the frustration many managers are facing about the difficulty in getting expected results from technology even when they believe in the ability of technology to bring transformative change to the business (Fitzgerald, Kruschwitz, Bonnet & Welch, 2013; Marchand & Wade, 2014). As, Majchrzak, Markus and Wareham (2016) observed, it is not a deficiency of technology that it cannot solve problems all on its own.

Although prior studies showed the interrelationships between specific types of efficiency driven and innovation driven digitisation strategy and elements of organisational capabilities as resources, process and culture (Chen et al., 2018; Felipe, Roldan & Leal-Rodríguez, 2017;

Majchrzak, Markus & Wareham, 2016; Bock, Opsahl, George & Gann, 2012), not many studies have simultaneously evaluated the relationship between these constructs and digital transformation outcome holistically. This has left a persistent gap in existing studies with regards to the mechanisms through which technology generates business value. Previous researches that looked at IT resources discussed IT resources in terms of technical know-how and IT enabling capabilities. There is an absence of materials that investigated the place of resource structuring - orchestration and complementarity - in digitisation synergistically. Even less is the number of inquiries into how organisational culture and practices impact digitisation and business value generation. There is the need, therefore, to strive to identify the complementary assets and specific configurations associated with success by extending BVIT scholarly focus on the factor's imperative to successful digitisation and business value generation.

The effort in this paper is to provide an integrative factor view of digital change and business transformation. In this way, it is expected that this paper will provide some theoretical insights that can enrich the understanding of IT value generation and encourage the development of potentially promising interventions that could promote digital transformation competence. This paper is intended to provide an insight into these value generation factors and why they are instrumental in digital business transformation and value realisation.

The integrated capability framework adduced here is premised on the assumption that the ability of an organisation to orchestrate its resources and process capabilities will be positively related to its ability to transform itself digitally, and realise benefits from IT investments. The assumption is anchored on the theorem that the combined and complementary use of distinct sets of resources produces an aggregate higher total return than the sum of returns that could have been achieved otherwise if each set of resources were utilised independently, ceteris paribus (Woudstra et al., 2017; Hock, Clauss & Schulz, 2015; Tang & Ghobakhloo, 2015; Hitt et al., 2011). A broad understanding of successful digital transformation and differential value creation factors as postulated in the integrated framework, necessitates drawing on a range of theoretical and empirical insights from strategic management, process engineering, and organisational sciences. That is the approach adopted here as advanced in the subsequent sections.

Resource capability. In the strategic management field, as Pettigrew, Thomas and Whittington (2002) observed, the human being as an actor has become lost among a flurry of independent variables such that little attention is paid to the impact of the individual and the networks they inhabit within the organisation. This observation is particularly true in the field of enterprise information technology decisions, especially in the current digital business transformation dispensation. As technology portends to enable the business, there is a frantic effort at being at the forefront of the adoption of the latest disruptive technology, almost exclusive of other contingent success factors. When a newly acquired technology fails to deliver the expected value, as is often the case, another technology is layered on the old technology to bridge the gap created in business enablement by the previous technology. There is the silver-bullet view of digitisation, that once a technology is adopted, the problem is solved.

The focus on hard technology is mostly because IT business value is considered a function of the information systems rather than the totality of the context within which it is adopted and how the system is exploited. However, research has shown that human and organisational implications associated with utilizing new technology which significantly impacts the success

or failure of IT investments, are too critical to be overlooked or just ignored (Shahiduzzaman & Kowalkiewicz, 2018; Ching Gu, Hoffman, Cao & Schniederjans, 2014; Coombs, 2012).

Discussing the importance of resource capability in relation to information technology, digitisation, and business value generation, Wood, Hewlin and Lah (2011) noted that technology does have its limits not because engineers cannot innovate, but because users cannot optimally use them. In his narrative on the untapped power of IT, Kenneally (2015) asserted that the rate of advancement in technology innovation outpaces organisations capability to leverage it. This situation creates a consumption or value generation gap. The level of value which IT can generate depends on if the system is deployed in such a way that it adequately leverages, in a complementary manner, on the existing organisational business and human resource assets. To buttress this point, the current Big Data hype readily comes to mind. The potential impact of big data as a business driver has gained an evangelical momentum in the marketplace such that organisations across all industries have invested heavily in Big Data initiatives. The result from the empirical study by Gupta and George (2016) positively validated the relationship between Big Data analytics capability and superior firm performance. However, the real-world evidence shows that big data is not a panacea, rather the interpretation of the data which continues to present the biggest challenge (Ransbotham, Kiron & Prentice, 2016). It is increasingly recognised that qualified information translated into valuable insights is more meaningful to the management than more data. Embracing technology innovation as Big Data and data analytics in appreciation of its potential for competitive advantage is one thing, but the ability to exploit Big Data to generate business value is another.

The capability of processing

The ability to build new capabilities other than the human resource such as processes is a part of the firm's bundle of capabilities that generate value. While references to the value and rarity of resources are often made, not much is argued or established with regards to how these resources influence firm competitiveness. Resources alone do not account for a firm's competitiveness. The ability of an organisation to harness and orchestrate its resources and the consequent performance optimization is largely enhanced by the presence of enabling business and managerial processes.

Operational efficiency, which is the value proposition of the business process, expectedly provides management with the capability to monitor, analyse, control, and improve the organisation’s workflow and activities. A smoothly functioning business process consists of an interrelated set of activities designed to transform inputs into outputs (Berman, 2014). Adequately designed and implemented business processes make enterprise operations more efficient while improving products, services, and profits (Gupta, Viyas & Tripathi, 2014).

The role of processes in change management notwithstanding, it is worth noting that the direct link between governance process and performance could be nonetheless disputed. Again, owing to the complexities involved in defining and measuring corporate performance, governance process, and productivity improvements, attributing enterprise change success to these factors is often difficult to substantiate. There is no doubt that if clearly defined business processes are absent, out of control and immature, the full potential of the adopted technology cannot be achieved. However, processes alone are not enough to deliver the business value of information technology. Preferably in combination with other success factors such as resources discussed in the preceding section. The interrelationship between resource capability and process capability is aptly summarised by Van Looy et al. (2011). While resource capability,

to Van Looy and others, refers to the ability or competence skills and knowledge of an organisation to achieve targeted result which leads to predictability, efficiency, and effectiveness of outcome, process capability on the other hands is the degree to which an enterprise has deployed processes to aid organisation's performance. These two organisational assets are complementary and reinforcing. Failures from change result from not recognising and aligning these two assets, not having adequate processes to underpin organisations change activities, and not adapting the organisation's structure and resources to align with the new and often better methods for working brought in by new technology.

The capability of cultural

Organisational culture has been recognised as an essential and influential factor in analysing organisations in various contexts, including its importance to establishing competitive and collaborative advantages, and its impact on organisations' long-term performance (Zhang & Li, 2016; Hogan & Coote, 2014; Bock et al., 2012). Hofstede (2010) and Schein (2010) enunciated the basic underlying principles, expressions, and manifestations of organisational culture. Organisational culture embodies widespread dominant practices and the underlying assumptions about how things are done here. According to Hofstede (2010) and Schein (2010), based on these essential embodiments and manifestation of culture, coalesced along a perspective that views organisational culture as a pattern of underlying assumptions, which have been either invented, discovered, or developed by a given group in dealing with its problems, considered to be valid, based on the fact that it has worked well enough to be regarded as such, and are as such consequently transmitted as the correct way to deal with such problems.

Discussing the impact of organisational culture as one of the situational variables instrumental to the successful implementation of changes in organisations, Latta (2009) argued that organisational change readiness is culturally embedded, fundamental to change process and have moderating effect on organisational change. As Latta (2009, p. 28) puts it, regardless of the strategies and tactics employed to implement particular change initiatives, the impact of these efforts will be moderated by elements of institutional culture. The same author further argued that the moderating effect of culture on change implementation has valence which is capable of either impeding or facilitating the change process, such that depending on the valence, the cultural moderation either creates a positive acceleration or a hindrance that will impact the expected outcome. Organisational culture as a sense-making process helps the employees of a given organisation to understand the organisational events and objectives, in turn influencing the innovativeness, efficiency, and effectiveness of the employees (Shahzad, Luqman, Khan & Shabbir, 2012).

Conclusion

The paper examined a capability-driven approach to successful digitisation and business value generation and argued that it is a product of organisational readiness for change. It postulated that the digitisation success and future of digital business transformation would be well served through an understanding of the integrated capability effect. The assumption is that the ability of an organisation to harness its core capabilities resources, processes, and culture positively relates to its ability to realise benefits from digital transformation investments.

The paper argued that a framework for digital business transformation should comprise three dimensions that together explicate how (1) resources, (2) processes, and (3) contextual factors

lead to the generation of value from information technology. As is mostly the case, there is a genuine intent to transform the business using digital. However, as is also often the case, the intention gets stuck on the technology piece with little or not much thought given to the mechanism of the transformation especially of resource, the underpinning process and the moderating impact of the prevalent organisational practices. It is essential for business and IT managers, therefore, to answer questions surrounding the delivery and exploitation capabilities of an organisation and the maturity of the supporting process, at the onset, if the identified digitisation investment objectives and stakeholder values are to be realised.

In the current business environment where technology has become a mass market, bringing in new technology no longer offers an edge over the competition. Both the established as well as below the radar but nimbler start-ups can adopt same or similar technology and faster too. The difference between success and failure depends on the organisation's ability to mobilise its resource assets around a shared vision, mission, goal, and value. It is essential, therefore, that managers prior to full-scale immersion in the transformation, evaluate not only the technology but also the organisations cultural and structural disposition to the anticipated transformation, and ensure a level of readiness which transforming the business digitally requires.

By addressing the issue with current digital business transformation practice which is technology driven, bereft of organisational and digitisation readiness, this paper generates theoretical insights that can enrich the understanding of IT value creation and proffers an integrated capability approach. The confirmation of the assumptions in the integrated framework postulated in this paper is subject to future empirical research.

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