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Leadership in the Digital Era

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Abstract

There are many signs indicating that something new has happened in the global economy during the last two decades. While the surge in labour and total factor productivity growth rates at the end of the twentieth century was notable and widely interpreted as a sign of a 'New Economy,' it remains to be seen whether it was a fleeting phenomenon or the beginning of a new trend. But there are other indicators that are less cyclical in nature and appear more likely to persist. Like the digitization of information, the Internet, big data, and general-purpose technology that is giving rise to a vast new array of possible combinations. The level of connectivity between different players is increasing dramatically. Interpreted in this way, the New or Digital Economy is about dynamics, not static efficiency. It is more about new activities and products than about higher productivity. What is really new in this economy is the proliferation of the use of the Internet, a new level and form of connectivity among multiple heterogeneous ideas and players, giving rise to a vast new range of grouping and outcomes. In this scenario, what becomes crucial is leadership. Hence, adopting a literature review method, this paper attempts to enhance the understanding of leadership in the digital era and provides some insights on how to transition from traditional leadership to digital leadership.

Keywords: Applications, Big-Data, Culture, Digital, Education, E-Commerce, Learning, Organizations, Value

Introduction

Rapid advances in digital technology and applications has stimulated and enabled dramatic growth in all spheres, including business. The digital economy is not limited to traditional business models. It encompasses every aspect of modern life; entertainment, health, education, business to banking, and the ability of the citizen to engage with government and society to stimulate new ideas and help influence political and social change. This has led to what is commonly referred to as "*digital economy"* or "*digital era"*. In simple words, the digital economy refers to an economy that is based on digital technologies, although it is increasingly perceived as conducting business through markets based on the internet and the World Wide Web. Digital networking and communication infrastructures provide a global platform over which people and organisations devise and employ new business strategies, interact, communicate, collaborate and seek information regardless of time and location. There are many issues which are affect the success of the digital economy, like the cultivation of a trusted environment for technology-enabled innovation to thrive or achieving the right balance to stimulate innovation and business growth while protecting the rights of the individual, intellectual property and privacy or actively address cyber vulnerability or cultivating a fully digitally-literate society for all to be able to use information and technology to take advantage of the growing digital economy or digital leadership itself. This paper focuses on digital leadership.

Background

The widespread use of digital technologies in all spheres — from manufacturing, education, health, and financial services to cultural and creative industries — combined with the emergence of hyper-connected technologies is rapidly changing the business paradigm globally. At the root of success in this new paradigm is innovation, a factor that is predominantly defined by skills and technological adaptability. The economy is being reinvented as a digital ecosystem that is highly reliant on skills, warranting individuals to possess a wide variety of new competencies to remain productive in this continually changing environment. An organisation's ability to innovate, compete, and respond to evolving market and consumer needs is increasingly determined

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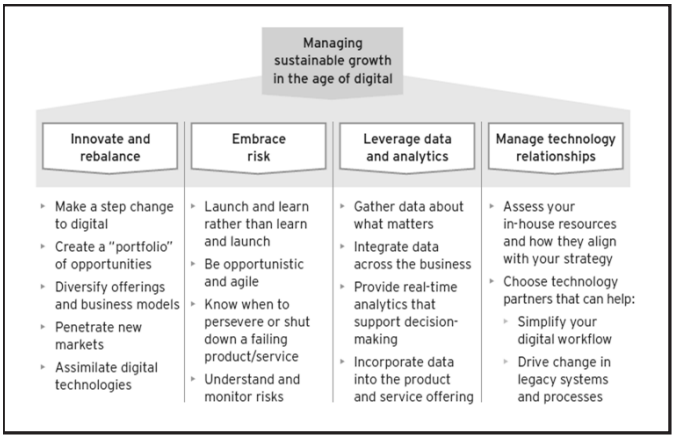
by its technological capabilities. Advanced technologies have been shown to heighten the value chain of any industry, from the way organisations manage their finances to efficient management of supply chain logistics to how they deal with their staff and clients. In short, the adoption of digital technologies enables businesses to become more productive and competitive, offer new products and services, and increase their scope and scale.

The digital economy is the new economy which is knowledge-based and relies predominantly on intellectual capabilities, reducing reliance on natural resources and physical inputs. In this ecosystem, knowledge, skills, and expertise are as critical as any other economic resource to succeed in an increasingly interconnected, globalised economy. At the root of this transformation is technological innovation — modifying business models across all economic sectors through virtualisation of operating systems, servers, storage devices, and network resources — as well as digitalisation of key business processes such as marketing, commerce, production, customer service, communication, and more. Digital technologies are changing the way companies do business, resulting in quick and easily accessible data and communications, information consistency, responsive case management and seamless information exchanges. As digital technologies transform the nature of work across organisations and sectors, every individual needs to be comfortable with *both* digital technologies and business operations. This is the only way business goals and strategies can be complemented and facilitated by emerging technologies in an increasingly connected global digital economy. Hence, digital skills and other complementary skills are essential in the new economic paradigm, and these skills are increasingly required in most sectors of the economy due to rapid digital transformations. Why is complementing digital skills with other business skills so important? Or is it possible for organisations in the digital economy to remain competitive without business skills? The answer to these questions lies in the nature of productivity and innovation as a result of business perspective. Digital technologies increase productivity and boost innovation; however, none of these are possible without an understanding of the business processes, hence the need to understand and develop digital leadership.

The term 'Digital Economy' was coined in Don Tapscott's 1995 book The Digital Economy: Promise and Peril in the Age of Networked Intelligence. The Digital Economy was among the first books to consider how the Internet would change the way we do business (Tapscott, 1997). According to Mesenbourg (2001), three main components of the 'Digital Economy' concept identifiable are:

- E-business infrastructure, which includes hardware, software, telecoms, networks, human capital, etc.
- E-business relates to how business is conducted, any process that an organisation conducts over computer-mediated networks (Baporikar, 2017).
- E-commerce refers to transfer of goods, for example, when a book is sold online.

Digital Leaders are those who are adept at using technology and are willing to share their knowledge and skills with others. Through working with staff, peers, and all the stakeholders, Digital Leaders are able to help shape how technology is used in and outside of their organisation to achieve goals and objectives and manage business in a sustainable manner. Digital leaders are becoming a crucial element for any organisation to be successful in this digital economy and thus hold the key to bringing transformational change. Hence, it is more effective to train Digital Leaders on using technology than to train staff so that they become capable to manage and grow sustainably in the digital era. Fig. 1 below shows how to manage sustainable growth in the digital era.



Source: Adopted from Ernst & Young Global Report, 2014.

Fig. 1: Growth Management in Digital Era

For too long, too many of us have been entranced by supermen. Constantly, we are barraged by domineering people in all walks of life presenting themselves as supermen, the ones who will fix everything and make

our problems go away. It's a seductive image, an enticing promise. And we believe it. Somewhere, there's someone who will make it all better. Somewhere, there's someone who's visionary, inspiring, brilliant, trustworthy, and we'll all happily follow him or her. Somewhere but the reality is to develop competencies to face the challenges and develop skills to solve the problems. Dependence and hope leads to passivity, and that may not lead to solutions required in this complex, interconnected global business digitalised world (Baporikar, 2023b; 2023c). It is time to stop waiting for someone to save us. It is time to face the truth of our situation—that we're all in this together, that we all need to figure out how to mobilise the hearts and minds of everyone in workplaces and communities and ensure sustainable leadership (Baporikar, 2023a).

In the traditional system and bygone era, we assumed certain things:

- Leaders have the answers. They know what to do.
- People do what they're told. They just have to be given good plans and instructions.
- High risk requires high control.

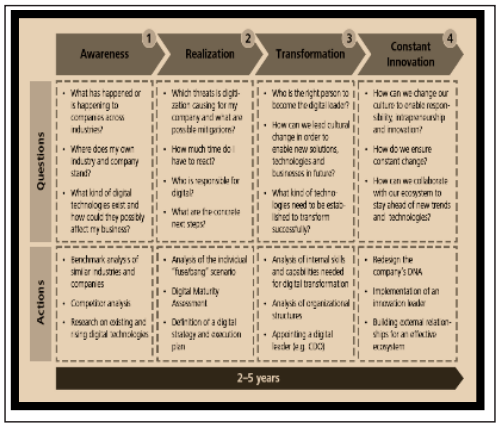
Such beliefs have given rise to authoritarian leadership globally. Those at the bottom of the hierarchy submit to the greater vision and expertise of those above. Such leaders promise to provide solutions and expect their command to be obeyed without questioning and this leader to subservience or willingly surrendering individual autonomy in exchange for security. But what is the situation in the current digital era.

Today, with complexity, any individual leader's attempt to control and provide solutions is next to impossible. Even if they were to work with a few of their trusted aides still, the possibility of them coming out with a solution is less. More often than not, this leads to more chaos due to the complexities of the problem. And people pressure them to do just that. Everyone wants the problem to disappear; cries of "fix it!" arise from the public. Leaders scramble to look like they've taken charge and have everything in hand. But the causes of today's problems are complex and interconnected. There are no simple answers, and no one individual can possibly know what to do. We seem unable to acknowledge these complex realities. But the fact is today's complex problems need a systems approach and systemic thinking, as linear thinking and the hurried approach with an attempt to find a simple solution (quickly) to a complex problem is the root cause. Hence, when the solutions do not arrive, we look for replacements but do not question our expectations of leaders; we don't question our desire for heroes.

For several years now, digital has been an appendage to "business as usual." Digital is not just part of the economy — it is the economy. It's an economy of limitless opportunities for some and disruption and displacement for others. Many firms — such as Kodak, Blockbuster, Sears and Blackberry — were unable to adapt, while others are thriving (Baporikar, 2022). Hence, adopting a literature review method, this paper attempts to enhance the understanding of leadership in the digital era and provides some insights on how to transition from traditional leadership to digital leadership.

Digital Transformation

Digital transformation is only about technology in part; it is also, and more importantly, about using new technology to enable novel or more effective business strategies and the ability to link learning and organisational tacit knowledge through digital access and dissemination (Baporikar, 2020). Managers think and believe that IT, Big Data, Analytics and, AI, or any other emerging technologies are what they need to invest in without clearly identifying the role these will play or enable them to make better decisions or serve the business purpose. Therefore, when beginning a digital business initiative, be sure you know why you are beginning it and what your business goals are. Figure 2 gives the phases of digital transformation.



Source: Adapted from Deloitte Digital, 2015.

Fig. 2: Phases of Digital Transformation

Essentials for Digital Transformation

- *Top Management Support:* It is a key for success. Managers who aren't directly involved in technology functions often assume that they are not "digital" managers. But as companies begin to engage more heavily in digital business, all managers must become digital managers. Whether directly involved in implementing the technology or not, managers must understand the business case for digital initiatives and what other aspects of the organisation need to be aligned to accomplish those goals. When executives simply delegate responsibility for digital business to the technologists, it is a recipe for near-certain failure. Not only does top management involvement in and direct support for digital business initiatives signal to the company that these initiatives are important, it can allow the other aspects of the organisation to become aligned with these goals. For the many top managers who don't believe they have the technological knowledge to effectively lead or support digital initiatives, it's important to realise that it's much easier to teach executives what they need to know about digital business than it is to equip technologists with the managerial experience and strategic insight they would need to lead digital business efforts effectively.
- *Enablement and Empowerment of Employees:* Even with strong top management support, digital business initiatives cannot be successful simply because they have a mandate from the top. If you just expect employees to engage in new digital business processes because your company adopts a new digital platform, you're in for disappointment because they won't. Employees typically don't have the time or the know-how to figure out new ways to work on the fly and in the context of their existing job responsibilities. Managers must give employees opportunities to succeed in digital initiatives. These opportunities can come in a number of forms. First, employees should be provided with adequate training to learn to engage the technology and digital processes effectively. Training need not take the form of traditional classes; it may simply mean ensuring that adequate resources are available online to help them learn (and ensuring that employees are aware of them). Alternatively, it may mean that employees are moved within the organisation more frequently so that they can learn other ways of doing things from co-workers. Second, employees must be given time and space to adapt. Employees are very good at sticking with established ways of doing things because they are safe and familiar. New ways of working require spare time and cognitive resources to learn the new system.

According to Andriole (2017), for one to lead one's organisation's technology transition, the first step is grasping the realities of digital transformation. However, many top management think and feel that digital transformation will provide efficiency, innovativeness and competitiveness. But the path to transformation — like most major corporate initiatives — is a risky one. Further, it is a fact; that there is still confusion about the process. Moreover, all companies need not digitally transform since each company, process, or business model may not require digital transformation. Moreover, digital transformation is not a software upgrade or a supply chain improvement project.

Digital is not the destination. Rather, it is laying the foundation for a more profound transformation to come. Information technology and computers can capture, move, and store data, but they cannot understand what the data means, which is why e-learning, cognitive systems and data sciences have become so vital (Baporikar, 2019). Finally, and most important, we need systems that learn

The challenges today go beyond information overload. It's impossible to create protocols, algorithms, or software code to successfully anticipate all the potential permutations, trajectories, and interactions. But cognitive systems are not simply programmed. They actually improve with use as they receive expert training, interact with clients and customers, and ingest data from their own experiences, successes, and failures.

Some people think of cognitive systems as super computers, and there is no question that the computational power behind systems like Watson's is considerable. But thanks to the increasing prevalence of application program interfaces (APIs) — which can be encoded into digital services and easily accessed or combined in new ways in the cloud — it's possible to build a kind of

thinking into virtually every digital application, product, and system. And because we can, we will. If it's digital today, it will be cognitive tomorrow — and not a distant tomorrow. IDC Research Inc. has estimated that by 2018, more than half of the teams developing apps will embed some kind of cognitive services in them, up from 1% in 2015.

Cognitive systems are already transforming everything from the world-changing to the everyday. For example, cognitive oncology is a reality. This breakthrough technology is now helping scale access to knowledge at Bumrungrad International Hospital in Thailand, Manipal Hospitals in India, and more than 20 hospitals in China. Cognitive assistants are at work helping build more intimate, personalised relationships at the Brazilian bank Banco Bradesco, the insurance company GEICO, and the retailer The North Face, etc. These are just a few examples of organisations that are using cognitive systems today.

It's important to note that we are not talking about the AI we see in movies. This isn't about creating a synthetic brain or an artificial human. Rather, this is about augmenting human intelligence. Indeed, there is nothing in either cognitive science or its application that implies either sentience or autonomy. Of course, anyone familiar with the history of technology knows that technological breakthroughs often have major effects on work and jobs. Some jobs are eliminated, while others are created. With cognitive systems, we are already beginning to see the emergence of new disciplines — from data curation to system training, as well as new fields of scientific knowledge and new kinds of work — quite possibly more than in any prior technology revolution.

Data can be seen as the world's great new resource. What steam power, electricity, and fossil fuels did for earlier eras, data promises to do for the 21st century — if we can mine, refine, and apply it (Baporikar & Musty, 2022). Thanks to the new generation of cognitive technologies, we can. Intelligence *augmentation* — IA as opposed to AI — will change how humans work together, make decisions, and manage organisations.

Concept of Leadership and Significance

Traditional leadership rests on the illusion that someone *can be* in control. No one is in charge of our food systems. No one is in charge of our schools. No one is in charge of the environment. No one is in charge of national security. No one is in charge! This is the reality in the current scenario and certainly cannot be changed by the boldest visions of our most heroic leaders. For complex systems to work well and deliver results, we need to stop believing and relying on individuals and get participative leaders who will know that problems are complex, understand the complexities and look for optimisation rather than quick-fix solutions. For that, we need patience, perseverance, forgiveness, and, most importantly, to learn from mistakes and step up to contribute, i.e. become part of the solution rather than part of the problems.

Leadership is "organising a group of people to achieve a common goal." The leader may or may not have any formal authority. The search for the characteristics or traits of leaders has been ongoing for centuries. History's greatest philosophical writings, from Plato's *Republic* to Plutarch's *Lives* have explored the question of, "What qualities distinguish an individual as a leader?" Underlying this search was the early recognition of the importance of leadership and the assumption that leadership is rooted in the characteristics that certain individuals possess. Galton concluded that leadership was inherited. In other words, leaders were born, not developed. Both of these notable works lent great initial support for the notion that leadership is rooted in the characteristics of the leader. Effective leadership comes from surprising places within hierarchical structures and can arise in situations where there isn't any formal organisation at all.

A review of the leadership literature provides one with a plethora of definitions and theories, all of which are defined or propounded to suit the perception of the authors who suggested them or as descriptions of the leadership landscape that existed during certain eras or periods of human life. This dynamism or unsettling nature of discourses on the concept of leadership may be attributed to the dynamic nature of the concept itself. The construct of leadership, as a determining factor to the realisation of collective goals fueled by man's insatiable needs dictated by changes in time and also its interaction with a wide range of entities (individuals, assets and community) with different demands and behaviours must always seek to catch up to ensure its relevance, hence, its dynamic nature. Therefore, an

attempt to hazard a definition that comprehensively captures or encapsulates what leadership is about would be an exercise in futility. However, an examination of the various theories (with a greater focus on contemporary ones) that have emerged on leadership provides some foundation for its understanding and appreciation. Older theories on leadership looked at the concept on a wide spectrum. Some of these theories personalised the concept, looking at it as a role only attainable by individuals born with certain innate qualities or personal characteristics – *Great Man and Trait theories*. Some also looked at it considering the behaviours or the actions exhibited by individuals in such leadership roles – *Behavioural theory*. Finally, also others looked at it as a process that is context-specific in nature – *Situational and Contingency theories*. Thus, leadership should not be perceived as solely the attainment of goals but also as a learning process, which would, in turn, lead to the development of resilience in both the leader and followers. Hence, leaders must:

- Provide an environment conducive for people to work together.
- Provide resources of time, the scarcest commodity of all.
- Insist that people and the system learn from experience frequently.
- Offer unequivocal support—people know the leader is there for them and not encumbered by senseless demands for reports and administrative trivialities.
- Reflect regularly and monitor and evaluate the performance.
- Appreciate and value cordiality and team spirit.

Organisational Leadership in Digital Era

Companies must rethink their structures and culture to better deal with new market environments and business models. The hierarchic organisation that prevailed in the 20th century's production-oriented industrial economy will not work in the more global and fast-changing digital economy. The companies that are most successfully adapting are making a cultural shift from "Mad Men" to "Math Men," where decision-making is increasingly based on data rather than on the frequently wrong opinions of senior executives. These companies are adding data scientists to enhance organisational learning. They've made some decisions faster by relying on algorithms, and they are introducing artificial intelligence, robotics, and other advanced technologies as appropriate.

Thriving companies also acknowledge the dark side of the digital economy and that more resources and a greater strategic emphasis on cyber security will be required to address the increasing number of attacks, the growing expertise of hackers, and the thriving black market for stolen data and malware. Luis A. Aguilar, former commissioner of the SEC, has warned that boards that choose to ignore or minimise the importance of cyber security oversight do so at their own peril. The digitisation of the economy is one of the most critical issues of our time. Digital technologies are rapidly transforming both business practices and societies. This was the case during the Industrial Revolution, and it is the case today. However, technologies advance rapidly, organisations and skills advance slowly, and the gap between swiftly evolving technology will enhance in the coming decades as artificial intelligence, robotics, networks, analytics, etc., will affect more. Inventing effective organisations for the digital economy is the grand challenge for our time, and the companies that are already adapting are leading the way, and these calls for action research and case studies to understand and learn from best practices (Baporikar, 2018).

Leadership impulses most often are born from the best of intentions. The reason is the desire to help, to solve, to fix. Yet this is the illusion of specialness, that there are only a few who can offer help, service, and skills is not true. If we don't do it, nobody will. It is also not true. Because when we look around, we'll notice that we're not alone. We're surrounded by people just like us. They, too, want to contribute; they, too, have ideas; they want to be useful to others and solve their own problems.

Conclusion

To conclude, for leadership to succeed in the digital era, the key strategies include thinking beyond products and services for innovation toward customer experience, supply chain, delivery and pricing models; acting faster, and not fearing failure. Learn from failure. Launch, learn, iterate and repeat. Continuous innovation at the pace

and scale required is not something individuals can do. Hence, partner especially with technology companies and technology-savvy individuals, promote greater collaboration with all stakeholders; apply big data analytics to integrate data from all touchpoints, especially mobile and social, to develop finer-grained digital segments and embrace the risks inherent in all this with a proactive risk management approach; identify the right "risk insights" that enable greater performance for your business. It is not that *all* work has changed. Far from it, the argument is, rather, that a range of features of work that were regarded in previous periods as exceptional or unusual are now consider routine.

This situation has not come about overnight. There have been three such periods since the end of the Second World War, and they are now in the fourth (Huws, 2012, 2014). The first, from 1945 to 1973, saw the creation of what has been variously termed the "post-war Keynesian welfare state," "the Golden Age of Capitalism," "Fordism," or "Les Trente Glorieuses." (Lipietz & Macey, 1987; Jessop, 1990; Fourastie, 1975 and Marglin & Schor, 1992). Meanwhile, this was a period both of frenetic growth and of economic instability. The "Asian Tiger" economies rose and crashed in the mid-1990s. However, the use of ICTs spread inexorably around the globe, and new industries and companies emerged based on their use. These included the "new breed of multinationals," (UNCTAD, 2004), specialising in outsourced business services, global telecommunications providers, media conglomerates, and the beginnings of the giant corporations that now dominate the digital space.

Thus, with the various changes, reforms and digitalisation in all sectors in many countries, it is crucial for organisations to investigate the effectiveness of leadership as well as the level of commitment among employees. As the theory of organisational commitment suggests that, by understanding when and how commitments develop and how they help shape attitudes and behaviours, organisations will be in a better position to anticipate the impact that change will have and to manage it more effectively.

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