

Mid-Ocean University

College of Management

Department of Business Administration



**The Impact of Digital Transformation on the Efficiency and Productivity at Telecom Sector in the
Kingdom of Saudi Arabia**

أثر التحول الرقمي على الإنتاجية في قطاع الاتصالات بالمملكة العربية السعودية

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Introduction:

Digital transformation has recently become a requirement for many global and giant companies in the world, to achieve competitive advantages in global markets as well as in the Kingdom of Saudi Arabia, where it has become one of the most attractive environments for the commercial and industrial world. Digital transformation is considered a revolution in the technology sector, especially the communications sector, through the application of its theories and the application of its tools in performing work tasks away from the traditional work method, which has become less efficient compared to digital transformation, which has achieved noticeable and clear progress, developing efficiency and productivity, accompanied by reducing costs and saving time and effort, which is created a strong competitive advantages in various industry sectors.

With the rapid growth in digital transformation in the world of industry, Europe is facing a serious challenge, facing risk and opportunity to keep pace with this development in digital transformation in industrial manufacturing will occur gross value worth 1.25 trillion euros meanwhile they will incurred the loss of 605 billion euros in foregone value added if not consider the development in digital transformation. (Berger, R. 2015). Due to economic changes, we need to focus on innovation and the readiness of the public and private sectors to enter the world of digital transformation in a way that enhances the capabilities of those institutions to advance the country's economy. Therefore, it was necessary to identify the most important factors and influences that play a role in making this experience of digital transformation successful, so a research questionnaire was conducted. A poll of 200 Saudi citizens from different regions within the Kingdom of Saudi Arabia. The research study was conducted in various health institutions/education/ministries. The questionnaire was supported by conducting an interview with 10 security experts in line with the country's vision 2030. (Alharbi, A. S. 2019, March).

The aim of this research is to identify the Impact of Digital Transformation on the Efficiency and Productivity at Telecom Sector in the Kingdom of Saudi Arabia.

Research Problem:

Digital transformation was relatively a new concept however, it had gained broader recognition in industrial world applied this approach in their business gained a positive effect and became target for leader companies.

Carroll, N., Hassan, N. R., Junglas, I., Hess, T., & Morgan, L. (2023). Digital transformation is here to stay. With the emergence of new digital innovations and diverse and rich data sources, only those organizations that can adapt faster and make better, quicker decisions will become more competitive.

Research Important:

Digital transformation is a key motivator for industry development and the shift to e-commerce Pereira, C. S., Durão, N., Moreira, F., & Veloso, B. (2022). The internationalization of companies is increasingly dependent on their digitalization. Since companies have begun to dematerialize borders and reduce costs through the use of e-commerce, they have also changed the way business is done, says Gregory.

Research Objective:

The Impact of Digital Transformation on the Efficiency and Productivity at Telecom Sector in the Kingdom of Saudi Arabia

Research aims to extent of the efficiency of digital transformation tools in business management in the communications sector.

Research Hypothesis:

What is the extent The Impact of Digital Transformation on the Efficiency and Productivity at Telecom Sector in the Kingdom of Saudi Arabia?

Research Limitation:

1-Objective Boundaries

The research sample will select in a deliberate way for (100) employees from the telecommunications sector in the Kingdom of Saudi Arabia 2024, where the total original community are (1000) employees.

2-Temporal Limits

The survey will be conducted from July, 2024 to Aug,2024.

3-Spatial Limits

The study will be conducted at the telecommunications sector in the Kingdom of Saudi Arabia.

Literature Review :

Silakova, L., & Nikishina, A. (2021, October) The study examined the impact of digital transformation of loyalty systems on the success of telecommunications companies. The telecommunications industry has particularly high customer churn rates, ranging from 10% to 67% per year on average. As a result, the cost of acquiring a new customer is 4-10 times Higher than keeping the asset. Therefore, the digital transformation of customer loyalty systems has become a tool for predicting customer behavior and providing relevant and timely offers, thus improving the user experience. The goal of this study is how to find a way to manage and monitor customer loyalty systems for telecommunications companies. Through digital transformation through business process management improvement measures based on the e-TOM model

Fletcher, G., & Griffiths, M. (2020), During Pandemic lockdown a lot of institutional are forced to go through digital transformation to handle its tasks and operations remotely but this revealed the poor readiness. VUCA, a managerial catchall acronym for Volatility, Uncertainty, Complexity and Ambiguity is a litmus test for recognizing unpredictable external environments, Based on the capability to apply digital transformation during pandemic lockdown and its unsatisfied results the research is summarize the root of cause into 3 factors , firstly organizations must improve their digital maturity, secondly, less digitally mature organizations are more fragile and finally organizations with higher levels of digital maturity are generally more flexible.

Awadhi, J., Obeidat, B., & Alshurideh, M. (2021), they evaluate the links between customer perceived expectations, customer perceived experience, and customer satisfaction in the United Arab Emirates' digital solution in the telecommunications industry using data analysis strategy to sample 130 clients , The research discovered a strong correlation between customer expectation and customer experience and the degree of satisfaction of individuals in the United Arab Emirates due to their use of or engagement with digital solutions of the telecommunications sector, independent of generational differences.

Ahmad, A. H., Masri, R., Zeh, C. M., Shamsudin, M. F., & Fauzi, R. U. A. (2020), they evaluate the impact of digital anti-fraud measures on the occurrence of occupational fraud, specifically in telecommunication industry, it was designed as a case study specifically in telecommunication industry involving underpinning theories and models. The paper has identified in view of digital disruption; the presence of technology advancement reduces the fraud opportunity element.

Majumdar, S. K. (1997), they studied the impact of digital technology diffusion on the productivity of firms making up the local operating sector of the U.S. telecommunications industry for the years 1991 to 1993, they found the spread of digital technology within the U.S. local telephone network plays a significant and positive role in impacting productive efficiency of the firms making up the network.

Pretorius, D. A. (2019) , the aim of this study is to explore the factors that affect digital transformation in a telecommunications company in South Africa using the explorative research strategy and the come up by the successful digital transformation of companies depends on how Management drives digital transformation, and the benefits of new digital technologies should be carefully considered when planning to implement digital transformation.

Silakova, L., & Nikishina, A. (2021, October) , The aim of the study is to propose the approach to managing of the digital transformation of customer loyalty systems of telecommunications companies by the measures of the business process management improving based on e-TOM model. They come up that the effectiveness of the digital transformation of the telecom provider's customer loyalty system show an increase in the efficiency coefficient from 0.62 to 1.08.

Radukić, Snežana, Zoran Mastilo, and Zorana Kostić(2019). Describe the impacts of digital transformation in the telecommunications markets which are characterized by network externalities. By showing disruptive effects of digital transformation age, the paper highlights challenges which were created by advancement of technological capabilities to discuss whether digital transformation could participate in customer satisfaction in telecommunications markets.

Pretorius, D. A. (2019). From this research, it was concluded, inter alia, that successful digital transformation of companies depends on how management leads digital transformation, and the benefits of new digital technologies should be carefully considered when planning to implement digital transformation. Therefore, the aim of this study was to explore the factors that influence digital transformation in a telecommunications company in South Africa, 'What are the factors that influence digital transformation in a telecommunications company in South Africa?' To answer this question, a study was conducted in one of the telecommunications companies in South Africa.

Aldiab, A., Chowdhury, H., Kootsookos, A., Alam, F., Alluhaybi, A., & Aloufi, H. (2022, November). The high-speed and reliable internet infrastructures are prerequisites for eLearning education, including virtual laboratories, remote-controlled laboratories, virtual reality (VR), and augmented reality (AR). Therefore, eLearning tools in the education process require efficient internet connection infrastructure in metropolitan areas and rural areas. This paper reviews the current telecommunication infrastructure in Saudi Arabia to highlight the minimum required standard for eLearning infrastructures.

Al-Ruithe, M., & Benkhelifa, E. (2017, October). Digital transformation in Saudi Arabia is one of the core elements to achieve the goals of Saudi Vision 2030. This paper puts the Kingdom of Saudi Arabia Vision 2030 for digital transformation under a test. The results of the study reveal that despite the wide recognition of the importance of data governance, especially for cloud computing, there is a consensus that this area is really in its infancy and almost absent from the Saudi organizations

Trenerry, B., Chng, S., Wang, Y., Suhaila, Z. S., Lim, S. S., Lu, H. Y., & Oh, P. H. (2021). The increasing demand for digital transformation will negatively affect creative employees with multiple practical, scientific, and administrative skills, as technology tools have begun to replace them and they no longer need them, and thus it will lead to a decline in interest in developing their personal skills. This is one of the most important challenges that organizations and governments face, and this indicates that most companies You will face an increasing decline in skills in the coming years.

Research Methodology:

In this research descript method will be used by doing survey over a sample of telecommunication sectors' employees in KSA.

CONCLUSION:

Digital transformation is the way forward for all companies. Technology is advancing at a rapid pace and companies must adapt to change, not only to take advantage of the enormous opportunities it offers, but also to remain relevant in this world of volatility, uncertainty, complexity and ambiguity (Shahi, C., & Sinha, M. 2021).

References:

1. Berger, R. (2015). The digital transformation of industry. The study commissioned by the Federation of German Industries (BDI), Munich (www.rolandberger.com/publications/publication_pdf/roland_berger_digital_transformation_of_industry_20150315.pdf).
2. Alharbi, A. S. (2019, March). Challenges in digital transformation in Saudi Arabia obstacles in paradigm shift in Saudi Arabia. In 2019 6th International Conference on Computing for Sustainable Global Development (INDIACom) (pp. 1287-1291). IEEE
3. Silakova, L., & Nikishina, A. (2021, October). Digital transformation of telecom providers management customer system: a process research and effects assessment. In Proceedings of the 3rd International Scientific Conference on Innovations in Digital Economy (pp. 81-90).
4. Fletcher, G., & Griffiths, M. (2020). Digital transformation during a lockdown. *International journal of information management*, 55, 102185.
5. Awadhi, J., Obeidat, B., & Alshurideh, M. (2021). The impact of customer service digitalization on customer satisfaction: Evidence from telecommunication industry. *International Journal of Data and Network Science*, 5(4), 815-830.
6. Ahmad, A. H., Masri, R., Zeh, C. M., Shamsudin, M. F., & Fauzi, R. U. A. (2020). The impact of digitalization on occupational fraud opportunity in telecommunication industry: a strategic review. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 17(9), 1308-1326.

7. Majumdar, S. K. (1997). Modularity and productivity: assessing the impact of digital technology in the US telecommunication industry. *Technological Forecasting and Social Change*, 56(1), 61-75.
8. Pretorius, D. A. (2019). Factors that affect digital transformation in the telecommunication industry (Doctoral dissertation, Cape Peninsula University of Technology).
9. Silakova, L., & Nikishina, A. (2021, October). Digital transformation of telecom providers management customer system: a process research and effects assessment. In *Proceedings of the 3rd International Scientific Conference on Innovations in Digital Economy* (pp. 81-90).
10. Radukić, S., Mastilo, Z., & Kostić, Z. (2019). Effects of digital transformation and network externalities in the telecommunication markets. *Economics*, 7(2), 31-42.
11. Radukić, Snežana, Zoran Mastilo, and Zorana Kostić. "Effects of digital transformation and network externalities in the telecommunication markets." *Economics* 7.2 (2019): 31-42.
12. Pretorius, D. A. (2019). Factors that affect digital transformation in the telecommunication industry (Doctoral dissertation, Cape Peninsula University of Technology).
13. Aldiab, A., Chowdhury, H., Kootsookos, A., Alam, F., Alluhaybi, A., & Aloufi, H. (2022, November). Telecommunication infrastructure in Saudi Arabia: Is it ready for eLearning?. In *AIP Conference Proceedings* (Vol. 2681, No. 1). AIP Publishing.

14. Al-Ruithe, M., & Benkhelifa, E. (2017, October). Cloud data governance in-light of the saudi vision 2030 for digital transformation. In 2017 IEEE/ACS 14th International Conference on Computer Systems and Applications (AICCSA) (pp. 1436-1442). IEEE.
15. Carroll, N., Hassan, N. R., Junglas, I., Hess, T., & Morgan, L. (2023). Transform or be transformed: the importance of research on managing and sustaining digital transformations. *European Journal of Information Systems*, 32(3), 347-353.
16. Pereira, C. S., Durão, N., Moreira, F., & Veloso, B. (2022). The importance of digital transformation in international business. *Sustainability*, 14(2), 834.
17. Trenerry, B., Chng, S., Wang, Y., Suhaila, Z. S., Lim, S. S., Lu, H. Y., & Oh, P. H. (2021). Preparing workplaces for digital transformation: An integrative review and framework of multi-level factors. *Frontiers in psychology*, 12, 620766.
18. Shahi, C., & Sinha, M. (2021). Digital transformation: challenges faced by organizations and their potential solutions. *International Journal of Innovation Science*, 13(1), 17-33.