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## DIGITAL TRANSFORMATION STRATEGY ADOPTION AND BUSINESS PERFORMANCE: A CASE STUDY OF SELECTED COMPANIES IN A DEVELOPING ECONOMY

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**Abstract.** Despite its numerous benefits to companies in modern era, digital transformation strategies are rarely adopted in developing countries. Consequently, this study demonstrates the benefits of digital transformation to performance of companies in developing economies and the reasons for non-adoption of digital transformation strategies in developing economies. The objective of the study was achieved by using case study analysis to analyse five companies from different industry in developed and developing economies. The findings of this study highlights the various ways digital transformation positively impacts a company's performance by improving business processes, reducing costs, or growing the revenue of the company. Evidence from the study also points at the lack of a digital transformation strategy, shortage of skills, absence of leadership support and unavailability of budget as the main reasons for the low rate of digital transformation adoption in developing economies. The study, therefore, concludes that digital transformation has the potential to significantly improve company performance in developing economies. Companies in developing economies could increase their performances by leveraging digital technologies and overcoming common.

**Keywords:** *adoption barriers, adoption strategy, case-study analysis, company's performance, developing economies, digital transformation.*

**Rezumat.** În ciuda numeroaselor beneficii pentru companii în epoca modernă, strategiile de transformare digitală sunt doar rareori adoptate în țările în curs de dezvoltare. Acest studiu demonstrează beneficiile transformării digitale asupra performanței companiilor din economiile în curs de dezvoltare și motivele neadoptării strategiilor de transformare digitală în economiile în curs de dezvoltare. Obiectivul studiului a fost atins prin utilizarea studiului de caz pentru a analiza cinci companii din industrii diferite din economiile dezvoltate și în

curs de dezvoltare. Concluziile acestui studiu evidențiază diferitele moduri în care transformarea digitală are un impact pozitiv asupra performanței unei companii prin îmbunătățirea proceselor de afaceri, reducerea costurilor sau creșterea veniturilor companiei. Dovezile din studiu indică, de asemenea, lipsa unei strategii de transformare digitală, deficitul de competențe, absența sprijinului de conducere și indisponibilitatea bugetului drept principalele motive pentru rata scăzută de adoptare a transformării digitale în economiile în curs de dezvoltare. Prin urmare, studiul concluzionează că transformarea digitală are potențialul de a îmbunătăți semnificativ performanța companiei în economiile în curs de dezvoltare. Companiile din economiile în curs de dezvoltare și-ar putea crește performanțele prin valorificarea tehnologiilor digitale și depășirea modelului adoptat anterior.

**Cuvinte cheie:** *bariere în adoptare, strategie de adopție, analiză de studiu de caz, performanța companiei, economii în curs de dezvoltare, transformare digitală.*

## 1. Introduction

The digital transformation of companies has become a prominent topic of discussion in recent years [1]. The universal use of digital technology, specifically, the internet and various digital platforms, has fundamentally altered the way businesses operate. This transformation has brought about numerous benefits for companies, including improved business processes, lowered costs, and increased revenue. This thesis aims to explore the impact of digital transformation on company performance and extend of digital transformation adoption in developing economies compared to developed economies. The research problem that this thesis aimed to address is the lack of digital transformation adoption in developing economies and how this hinders company performance. The specific research problem that this thesis will address is the low adoption rate of digital transformation in developing economies and what stumbling blocks affect companies in developing economies from adopting effective digital transformation strategies.

Digital technology and digital transformation have become important components of achieving business goals [1]. These concepts have become integral to a company differentiating their offering and gaining a competitive advantage. As a result, Digital transformation has become a big focus area for companies. The research problem that this thesis identified is that is the lack of digital transformation adoption by companies operating in developing economies in comparison to companies in developed economies. The main research problem of this thesis is whether a digital transformation strategy would have a positive impact on company performance. The secondary research problem that this study aimed to address is the low adoption rate of digital transformation in developing economies and how this impacts companies in developing economies.

Digital transformation has emerged as a significant driver of business growth, productivity, and innovation [2]. However, while developed economies have embraced digital transformation and reaped its benefits, developing economies have lagged behind in this regard. There is limited research available on the reasons for the lack of adoption in developing economies. Hence, the primary research question for this thesis was to understand if a digital transformation strategy based on business drivers can improve company performance. Understand how digital transformation can lead to improved business processes, greater customer experience, lowered costs, or increased revenues. The secondary research question is what are the main reasons that companies in developing economies are not adopting digital transformation strategies as widely as companies in developed

economies? Is the lower adoption due lack of digital transformation strategy and leadership buy-in, shortage of skills, limited budget, or lack of infrastructure?

## **2. Literature Review**

While applying digital transformation to impact company performance the first element is to understand the digital technologies available and their possible application to business outcomes. Additionally, the literature will cover the key measurements of company performance and business outcomes pursued by companies. Lastly, the challenges that hinder a company's willingness to adopt a digital transformation strategy in pursuit of achieving the business outcomes and improving company performance. Digital transformation has emerged as a critical strategic imperative for businesses across industries, as they strive to adapt to the rapidly evolving digital landscape [3]. This literature review aims to synthesize the existing research on the impact of digital transformation on company performance by reviewing the available digital technologies, their potential business applications and theoretical improvements, the key performance indicators for company performance and the challenges hindering digital transformation initiatives.

Digital transformation technologies are a big part of driving innovation, efficiency, and value creation for businesses in developing countries. These technologies consist of a number of tools and solutions that enable businesses to modernize their operations, enhance customer experiences, and leverage data-driven insights. Here is a comprehensive overview of some key digital transformation technologies available to companies in developing countries. The extant literature highlights the wide array of digital technologies that can be leveraged to drive business transformation, including cloud computing, big data analytics, artificial intelligence, the Internet of Things, and mobile technologies.

Cloud computing has emerged as a transformative technology that is reshaping the business landscape. This innovative approach to computing, where resources are delivered on-demand over the internet, has the potential to significantly impact company performance in various ways. One of the primary benefits of cloud computing is its ability to drive business process improvement [4]. By leveraging cloud-based services, companies can streamline their operations, automate tasks, and improve workflow efficiency [5]. This can lead to enhanced productivity, reduced errors, and better decision-making, ultimately contributing to improved overall performance. Moreover, cloud computing can have a positive impact on revenue growth. By providing scalable and flexible IT infrastructure, cloud solutions enable companies to respond more quickly to market changes and customer demands. This agility can translate into the ability to launch new products or services faster, expand into new markets, and better serve existing customers [6].

Furthermore, the cost-effective nature of cloud computing can free up resources that can be allocated towards strategic initiatives, further driving revenue growth. Moreover, cloud computing can have a positive impact on revenue growth. By providing scalable and flexible IT infrastructure, cloud solutions enable companies to respond more quickly to market changes and customer demands. This agility can translate into the ability to launch new products or services faster, expand into new markets, and better serve existing customers [6]. Furthermore, the cost-effective nature of cloud computing can free up resources that can be allocated towards strategic initiatives, further driving revenue growth. Cloud computing can also contribute to cost reduction. By shifting IT infrastructure and services to the cloud, companies can reduce operational, and capital expenses associated with maintaining on-

premises hardware and software. Additionally, the pay-as-you-go model of cloud computing leads to cost efficiencies and improved financial performance.

Having flexible and scalable infrastructure allows for big data analytics. Big data analytics has emerged as a powerful tool that enables businesses to gather, process, and analyse vast amounts of data from various sources, leading to more informed decision-making and strategic planning [7]. As companies strive to optimize their operations and drive growth, the effective utilization of big data analytics has become a critical component of their success. Additionally, big data analytics can provide companies with detailed insights into customer behaviour, preferences, and purchasing patterns, allowing them to tailor their offerings and marketing strategies to better meet the needs of their target audience [8, 9]. Additionally, big data analytics can provide businesses with detailed insights into customer behaviour, preferences, and purchasing patterns, allowing them to tailor their offerings and marketing strategies to better meet the needs of their target audience [8, 9]. This can lead to increased revenue generation and improved customer loyalty. Furthermore, the application of big data analytics in areas such as supply chain management, inventory optimization, and resource allocation can result in significant cost savings for organizations.

Artificial Intelligence (AI) and Machine Learning (ML) play a significant role on the impact of big data analytics on business processes, revenue growth, and cost reduction. AI refers to the simulation of human intelligence processes by machines. In the realm of big data analytics, AI enables the automation of data analysis. The integration of AI and ML with big data analytics has profound implications for business processes. AI-powered analytics tools can identify inefficiencies, patterns, and trends within business operations, leading to streamlined processes, reduced errors, and enhanced productivity. By leveraging AI-driven insights, companies can make real-time adjustments to their operations, improving overall efficiency and effectiveness. This affects revenue growth, AI-driven analytics can empower businesses to personalize customer experiences, optimize pricing strategies, and identify new market opportunities.

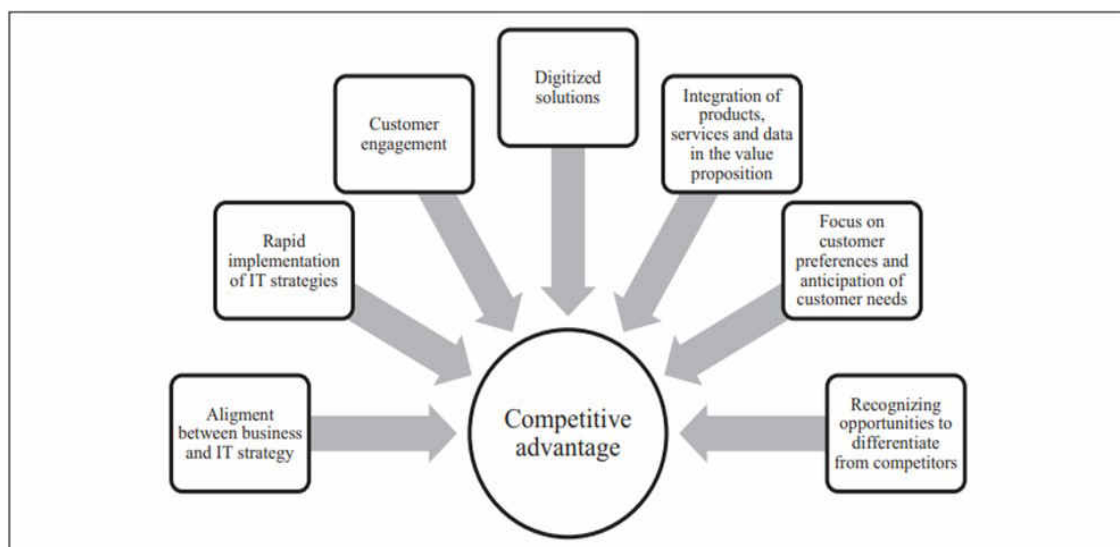
Through advanced predictive analytics and machine learning algorithms, AI can forecast customer demand, behaviour, and preferences, enabling businesses to tailor their offerings and marketing efforts to meet customers' evolving needs. This personalized approach often leads to increased customer satisfaction, loyalty, and ultimately, revenue growth. AI and ML impact on cost reduction are equally profound. By automating repetitive tasks, such as data entry, analysis, and reporting, AI and ML allow employees to focus on higher-value activities, leading to increased productivity and efficiency. Additionally, AI-powered predictive maintenance and demand forecasting can help companies optimize resource allocation, reduce waste, and minimize operational costs. Moreover, AI and ML ability to identify and mitigate risks in real time can prevent costly errors and disruptions, further contributing to cost savings. The integration of AI into big data analytics has the potential to transform businesses by enhancing processes, driving revenue growth, and reducing costs, ultimately leading to improved performance and competitiveness in the ever-evolving marketplace.

Robotic Process Automation (RPA) involves automating repetitive and rule-based tasks using software robots or bots. RPA can streamline business processes, reduce errors, and enhance operational efficiency. Businesses can deploy RPA solutions to automate tasks like data entry, invoice processing, and customer support, freeing up human resources for more strategic work. According to [2], the increased use of social media and mobile devices resulted

in many businesses developing an online presence to connect with their digitally savvy customers. Data sources like Facebook, LinkedIn, TikTok and Instagram are essential tools because businesses can integrate the information into the sales process and customer experience. Potential customers can also be exposed to business offerings on social media and want to be able to view store inventory online before going into a physical store. RPA can drive innovation and accelerate digital transformation, positioning businesses for long-term success in an increasingly competitive landscape. Thus, embracing RPA's full potential entails not just adopting the technology, but also fostering a culture of continuous improvement and innovation to truly reap the rewards it offers.

Digital transformation in developed economies has become very important for achieving business goals. According to [1], digital transformation can be a key step for businesses to differentiate their offerings and gain competitive advantage. The researcher extends this to businesses in developing economies. This research will identify the drivers, desired business outcomes. Integration of digital transformation can impact business outcomes through their products, customer experience, business processes, sales channels, and supply chains. Potential drivers of business performance include larger market share and sales revenue, innovations in value transfer into the market, as well as re-imagined forms of interaction with customers, among others. As a result, entire business models can be reshaped or replaced to achieve predetermined business outcomes and capture a competitive advantage as shown below [10].

By embracing digital tools and strategies, companies can enhance operational efficiency, improve customer experience, and drive innovation. Moreover, digital transformation can enable companies to gather and analyse data more effectively, leading to informed decision-making and a deeper understanding of market trends. As a result, businesses can gain a competitive advantage and position themselves for long-term success in the ever-changing global marketplace. Figure 1 shows combinations of digital transformation strategies that can be adopted to achieve predetermined business outcomes and capture a competitive advantage.



**Figure 1.** Combinations of digital transformation strategy that can yield a competitive advantage [11].

Traditionally digital transformation studies have concentrated on conceptualizing and formulating implementation strategies. Noticeably, few studies have addressed the effect of digital transformation on company performances. A study by [1] found a direct positive impact of technology adoption on company performance, arguing that it may be observed more effectively in the long term, rather than in the short term, due to the complex nature of the technology adoption. Furthermore, operating performance was found to be much more affected by digital transformation than financial performance.

The decision for a business to embark on a digital transformation strategy requires investment from the company and that makes it a difficult decision that must be supported by top leadership. As highlighted by [12], any investment initiative must address and respond to a concern from investors: 'What is the value returned by the respective investment?'. Investments in technology to fulfil on digital transformation strategy are crucial because the business performance will strongly depend on the measurements and outcomes of the investment in the digital transformation and associated technologies.

The relationship between digital transformation and return on investment (ROI) for companies in developing countries has various theoretical perspectives and implications. ROI is a measure of the profitability and effectiveness of investments made by a business. The interpretation of digital transformation and ROI can be examined from three perspectives.

Digital transformation can also aid in enhancing the customer experience. It enables companies to personalize interactions, offer seamless omnichannel experiences, and provide convenient self-service options. By leveraging data analytics, AI, and machine learning, businesses can unpack deeper insights pertaining to customer behaviour, preferences, and needs, then use this information to tailor their products and services in line with demand. A better customer experience can increase customer satisfaction, loyalty, and ultimately, company performance. By adopting digital systems, companies can optimize workflows, minimize manual tasks, reduce errors, and achieve cost savings. Cloud computing enables scalable infrastructure, facilitating flexible resource allocation and reducing IT maintenance costs. Additionally, process automation can eliminate repetitive tasks, freeing up human resources to focus on business-critical activities.

Digital transformation fosters innovation by enabling organizations to experiment with new business models, products, and services. Agile methodologies and collaborative tools empower teams to iterate quickly, respond to market changes, and adapt to customer needs. Cloud-based platforms provide scalability and accessibility, allowing businesses to experiment and deploy new solutions rapidly. Furthermore, digital transformation promotes a culture of innovation, encouraging employees to think creatively and embrace change.

Leveraging advanced analytics and AI algorithms, organizations can extract actionable insights from data, enabling informed decision-making. Real-time analytics and predictive modelling enable proactive decision-making, enabling businesses to anticipate market trends, optimize operations, and enhance strategic planning. Data-driven decision-making leads to improved business outcomes and a competitive advantage. With the proliferation of interconnected devices and the increased reliance on cloud services, organizations must prioritize robust security measures to protect sensitive data. Investments in cyber security frameworks, encryption technologies, and employee training are essential to mitigate cyber threats. Effective risk management strategies should be implemented to identify and address potential risks associated with digital transformation initiatives.

Digital transformation can bring numerous benefits to a company, such as increased operational efficiency, improved customer experience, greater return on investment and better decision-making as mentioned in previous sections. However, several hindrances can impede the realization of these benefits. According to [13], most these hindrances fall in the area's digital transformation strategy, skills shortage, IT department function company culture and budget constraints. Despite the potential for significant improvements, there are several hindrances this thesis addresses when it comes to digital transformation in developing economies. One of the primary obstacles is the lack of infrastructure, including reliable internet connectivity and access to technology. Limited digital literacy and skill gaps among the workforce also pose a significant challenge. Moreover, the availability of affordable digital tools and resources, along with the high costs associated with implementing and maintaining digital infrastructure, often present barriers to companies in developing economies. Cultural resistance to change and the difficulty of aligning digital initiatives with existing business processes are also common impediments. As such, addressing these hindrances is critical for companies to fully leverage the potential benefits of digital transformation in developing economies.

Digital transformation often requires specialized skills such as data analysis, software development, cyber security, and AI expertise. Shortage of these skills within the business can impede progress and key challenges include talent acquisition because recruiting and retaining skilled professionals can be challenging, particularly in competitive markets [14]. The demand for digital transformation skills often outstrips the supply, leading to difficulty in finding suitable candidates. Additionally, existing employees may lack the necessary skills to drive digital transformation initiatives. Insufficient training programs or a lack of focus on up skilling limits the workforce's ability to adopt and leverage new technologies effectively.

The skills required for effective digital transformation also require a well-defined and aligned digital strategy for successful transformation. According to [15], hindrances in this area can include lack of clear vision results in decision-making and implementation may become fragmented. A lack of direction can lead to inefficient resource allocation and conflicting priorities. Additionally, inadequate planning and assessment of technology requirements can result in suboptimal implementation and limited integration between systems hindering the realization of intended benefits.

In order for the strategy to be successfully implemented the IT department must be seen as a contributing factor. According to [16], IT department plays a crucial role in driving digital transformation. Challenges include outdated legacy systems which delay inclusion of new technologies and limit the scalability and flexibility required for digital transformation initiatives. Slow IT operations leads to lack of communication and collaboration between different IT teams or departments and can impede the implementation of holistic digital solutions. Effective leadership is essential for driving and sustaining digital transformation. Insufficient digital literacy and a limited understanding of emerging technologies among leaders can hinder decision-making and strategic planning related to digital transformation. Effective digital leadership is crucial for setting a clear vision and driving change. Additionally, poorly managed change processes, including a lack of communication, involvement, and support from leaders, can result in employee resistance and project failure [17].

Digital transformation often requires justified investments in technology infrastructure, software, training, and skilled employees. Limited budgets or cost-cutting measures may hinder a business's ability to invest in the necessary resources for successful

digital transformation. Insufficient funds can result in delays, suboptimal technology choices, or an inability to scale the initiatives effectively.

Overcoming these hindrances requires a holistic approach that involves addressing skill gaps, developing a clear digital strategy, enhancing IT capabilities, fostering a supportive culture, and nurturing effective digital leadership. By actively addressing these challenges, companies can increase their chances of realizing the benefits of digital transformation. The success of a digital transformation strategy will be dependent on overcoming these barriers, before the digital technologies are select, the internal mindset of the company must be open to it. Once these are adopted effectively that is when a company can start seeing changes on business process and ultimately receiving a return on the investments.

According to [18], developed countries such as Germany, the United Kingdom, and the United States took nearly four years on average to move from the emerging to the transitional stage of digitization and now, developing countries such as the United Arab Emirates, Kuwait, and Estonia are making that same amount of progress in less than two years. Following [19], digital transformation is important for the achievement of business outcomes given the many benefits companies can benefit from digital transformation to improve customer experience, operational efficiency and process innovation and agility. However, several hindrances such as lack of skills, poor digital strategy, leadership, company resistance to change and budget constraints can hinder digital transformation [13].

Companies in developing economies need comprehensive strategies that focus on improving infrastructure, increasing digital literacy, and creating an enabling environment for innovation and investment in digital technologies. This will require collaboration between governments, private sector, and international organizations to overcome the hindrances and drive effective digital transformation in these economies.

The goal is for companies to see that digital transformation must be part of their strategy to meet expectations of the market under the 4th industrial revolution. There are a wide range of technologies available to companies embarking on a digital transformation journey, each affecting the company's way of work. These changes to the way of work have an impact on company performance by affecting process, cost, or revenue. Unfortunately, there are a number of stumbling blocks to effective digital transformation strategy adoption. These include lack of skills, lack of leadership buy-in, lack of budget and technology integration. By looking at these variables and providing recommendations this thesis aims to address the issues of low adoption in developing economies.

### **3. Materials and Methods**

This study is a qualitative study based on recent digital transformation strategy-driven projects that have been undertaken by selected companies. The focus is on understanding the business intent behind these projects, the desired business outcomes they planned to attain, the digital technology used and the actual outcomes they experienced. The research aimed to provide valuable insights into the challenges and used as recommendations for companies that aspire to employ digital transformation strategy to improve company performance for South African based companies.

The research consists of three phases. First is to identify 10 companies that recently implemented a digital transformation strategy and to have a sample split between developed and developing economies. Additionally, to have a split in sectors (public and private sector) as well as different industries to ensure that the significance of the research will be applicable



to multiple companies in any industry. We conducted this by reviewing key case studies that are made available via public platforms and literature on digital transformation implementations in the last 4 years.

The second phase was to identify the business drivers for implementing a digital transformation journey whether; it was to increase efficiency of process, lower costs or to improve customer experience. Understanding the drivers allowed the researcher to interrogate how the company being reviewed planned to achieve these set business outcomes and why digital transformation was the answer to the plan. Finally, the researcher identified the digital technologies that aided in achieving the desired business outcomes and can serve as a blueprint in the recommendations in significance of the study to companies in developing nations to grow their digital transformation strategy.

The final phase was to bring forward the challenges faced that may be relevant to other companies. The challenges are studied to be a reference point to companies currently facing these challenges. The challenges will be broken down and the solutions that the company in question provided to the challenges will also serve as a recommendation to prospective companies. The final element is to give evidence of improved company performance by meeting the predetermined business outcomes and how the use of digital technology and transformation yielded these positive outcomes. The intended is for the increased performance to serve as motivation to other companies and contribute to the significance of the research.

The population of this study was companies operating in developed and developing economies with a strong digital footprint or strategy in place. The sample was then broken down into five companies from developed economies and five companies in developing economies to give a comparative view on the delayed adoption in developing economies. The study also focused on companies in different industries with the main driver being companies in developing and developed economies. Additionally, there will be companies that are in the public sector and companies in the private sector. The sample is made up of companies that have recently undergone a strategy shift to incorporate a digital transformation journey. The case study research will be based on assessing the sample groups business drivers for adopting a new strategy, the desired goals of the new strategy, how the company implemented the new strategy with the use of digital technology, the challenges the company faced as a barrier to implementation, and lastly key outcomes realised because of adopting the new technologies for digital transformation strategy. The business outcomes achieved will serve as a base for recommendations to South African companies.

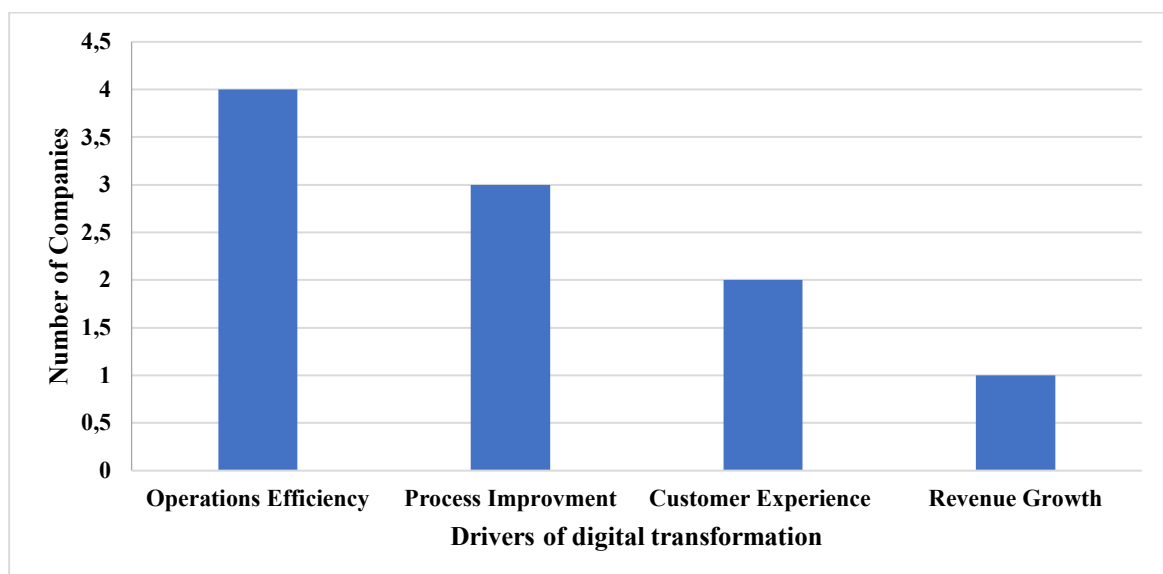
Case study analysis was conducted on companies that implemented digital transformation strategies. The case study analysis focused on: What were the primary business drivers behind the digital transformation strategy, what the end goal was, how the company planned and strategize for the digital transformation project, what were the main challenges and what was the overall outcome. The case studies that were used for this research were obtained from a public platform that the researcher has access to because of working at BCX, a leading ICT service provider. This was addressed in the ethical compliance documentation. The case studies focused on the project lead for digital transformation driven by the IT manager or CIO of the company. The 10 companies are operating in a few industries across varying countries. Five were in first world economies, and the other five were in developing economies to show that digital transformation strategies can benefit the business-driven outcomes of any economy and motivate developing economy companies.

All the case studies focused on the main business drivers for the new strategy or implementation of digital technology. The focus was also on the strategy driver and the researcher will highlight how the companies set out to achieve the predetermined strategy as stated in the case studies. A big contribution of this research is to identify that there will be challenges with implementing digital transformation. This methodology, therefore, is to understand the business needs for digital transformation and how companies in similar industries can apply digital transformation in order to achieve these business needs. This study is thus used to highlight how companies have implemented digital technology available in order to achieve the desired business outcomes vis a vis the challenges faced in digital transformation adoption and development. Ultimately, the research methodology in the thesis is to give motivation to companies in developing economies.

#### 4. Results and Discussions

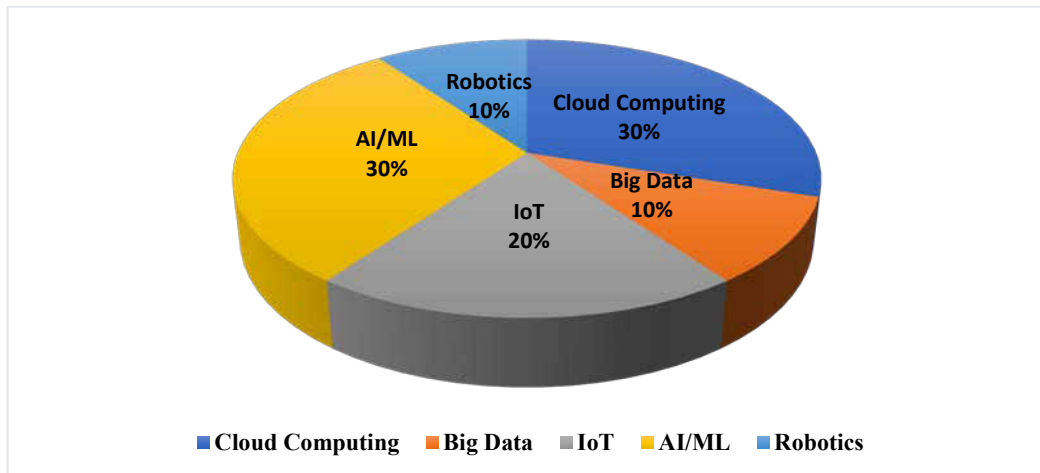
The case studies adopted in this study focused on a project lead for digital transformation driven by the IT manager or CIO of the company. The 10 companies are operating in a number of industries across different countries. Five were in first world economies, and the other five were in developing economies to show that digital transformation strategies can benefit the business-driven outcomes of any economy and motivate developing economy companies.

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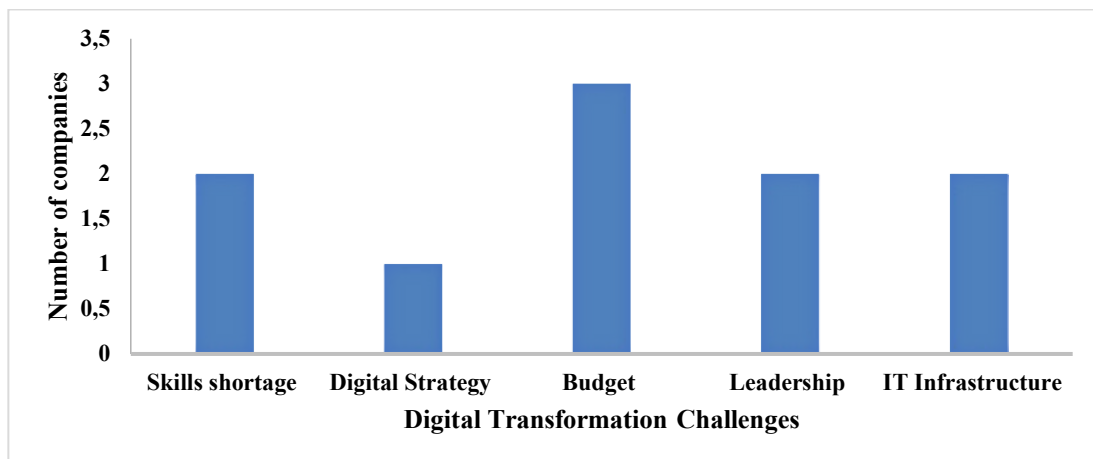
**Figure 2.** Main drivers of digital transformation.

Figure 3 shows the most common digital technologies used in the implementation of a digital transformation strategy. The most popular technology used in the case study reviews were split between AI/ML and cloud computing. The popularity of AI/ML stems from data storage and insights that comes from data that companies used to improve their business outcomes. IoT is another technology growing in adoption and can be seen as a source of additional actionable insight from any location, not just data centres.



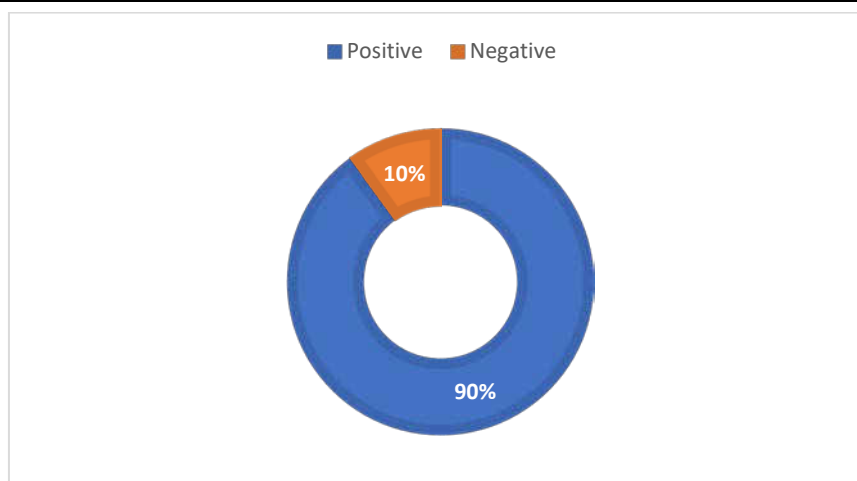
**Figure 3.** Digital technology adopted by companies.

Figure 4 presents the challenges faced by companies in the case studies in their quest to embark on a digital transformation journey. The most common challenge was budget, and this was most prevalent in companies in developing nations. This is the most common reason that companies are not able to implement effective digital transformation. Legacy infrastructure, skills shortage and leadership buy-in are the second most common and applicable to companies in developing economies as seen in figure four below.



**Figure 4.** Challenges to digital transformation.

The last element in the case study review is whether the company experienced a positive outcome in the pursuit after implementing digital transformation. As seen in figure 5 below 90% of the companies that were reviewed via case study experienced a positive outcome on the expected business drivers. The 10% that were not positive were as a result of poor planning and leadership blockage, the coupled with lack of skills and budget can stop the overall outcome of digital transformation.



**Figure 5.** Business outcomes results.

## 5. Conclusions

This study has provided an empirical review of recent digital transformation projects in companies, focusing on business intent, desired outcomes, and actual outcomes. The case study reviews and analyses of outcomes aimed to ascertain valuable motivation and recommendations that can be transferred to South African companies' operating in this developing economy.

The findings from the case study reviews were that while many companies in diverse industries and countries may operate differently and have business outcomes specific to them only, the implementation of digital transformation strategy and use of the digital technologies available plays a role in meeting those business outcomes. The case studies viewed public and private sectors in developing economies and in developed economies serving as a blueprint.

The common findings were that cost reduction, environment or process efficiency, service delivery and customer experience as a business outcome were the main drivers for undergoing the digital transformation. As much as it was a decision driven by the IT department needs, digital transformation strategy implementation requires a team effort. The users on the new technology will be integral to the success of the strategy. The strategy was underpinned by using data and analytics as the data informed other decision makers in the companies to make changes and respond to insights to improve business outcome achievement.

Data was a big contributing factor to achieving predetermined outcomes, the use for informed action in any company will be key, many companies have large inputs of information and data so, the automation of analytics via IT and digital platforms has empowered companies to respond more effectively to the needs of customers and citizens. When looking at fast data pools and lakes, the technology underlay was important for all companies when processing data, storing data and accessing data. While the need for digital transformation was clear across industries, companies and economies challenges did exist. This research did show that in the developed economies the challenge was on the adoption and leadership buy in for the digital strategy implementation. The challenges came from the leadership when the question of "Will it work" and "What will this achieve" came into play.

Additionally, there were concerns from employee and resource shifts, if digital technology did the work, then what the employees would do. These concerns trickled down from leadership to employees and hindered the ease of digital transformation adoption. In

the developing economies the challenges were more related to the cost and budget availability for the implementation of the new technologies to achieve the business outcomes. The lack of financial resources is not a new phenomenon in developing economies so companies have had to be open to new forms of financing like OPEX-based expenditure as opposed to a full CAPEX layout. In order for a digital transformation strategy to be fully beneficial for company performance there needs to be leadership buy-in, collaboration with employees in the process, budget made available via new financial models, partnering with suppliers to make it affordable while addressing the skills gap, clearly defined business outcomes and an understanding of digital technologies available.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

1. Masoud, R.; Basahel, S. The effects of digital transformation on firm performance: The role of customer experience and information technology innovation. *Digital 2023*, 3(2), pp. 10-26.
2. VanDyk, R.; VanBelle, J. Drivers and challenges for digital transformation in the South African retail industry. In: *Information Technology for Management, Proceedings of the 17th Conference Current Research and Future Directions*, Springer International Publishing, Leipzig, Germany, 2019, pp. 42-62.
3. Ziyadin, S.; Doszhan, R.; Borodin, A.; Omarova, A.; Ilyas, A. The role of social media marketing in consumer behaviour. In: *E3S Web of Conferences*, EDP Sciences, 2019.
4. Hugos, M. H.; Hulitzky, D. *Business in the cloud: what every business needs to know about cloud computing*. John Wiley & Sons: New York, US, 2010; pp. 154–196.
5. Armbrust, M. *Above the clouds: A Berkeley view of cloud computing*. University of Berkeley, California, USA, 2009, pp. 1-23.
6. Marston, S.; Li, Z.; Bandyopadhyay, S.; Zhang, J.; Ghalsasi, A. Cloud computing - The business perspective. *Decision support systems* 2011, 51(1), pp.76-89.
7. Maroufkhani, P.; Wagner, R.; Wan Ismail, W. K.; Baroto, M. B.; Nourani, M. Big data analytics and firm performance: A systematic review. *Information* 2019, 10(7), pp. 2-26.
8. Samadi-Parviznejad, P. The role of big data in digital transformation. *Journal of Data Analytics* 2022, 1(1), pp. 2-7.
9. Roedder, N.; Dauer, D.; Laubis, K.; Karaenke, P.; Weinhardt, C. The digital transformation and smart data analytics: An overview of enabling developments and application areas. In: *Proceedings of 2016 IEEE International Conference on Big Data*, pp. 2795-2802.
10. Matt, C.; Hess, T.; Benlian, A. Digital transformation strategies. *Business & information systems engineering* 2015, 57(3), pp. 39-43.
11. Kraus, S.; Jones, P.; Kailer, N.; Weinmann, A.; Chaparro-Banegas, N.; Roig-Tierno, N. Digital transformation: An overview of the current state of the art of research. *Sage Open* 2021, 11(3), pp. 21-58.
12. Pfister, P., Lehmann, C. Measuring the success of digital transformation in German SMEs. *Journal of Small Business Strategy* 2023, 33(1), pp.1-9.
13. Nielsen, P. A.; Lund, M. B.; Breaking barriers to digital transformation: Exploring the interplay of IT culture with enabling conditions. *Information & Management* 2019, 55(3), pp. 318-332.
14. Simic, L.; Marinković, V.; Kovačić, A. Skills shortages as the main obstacle to digital transformation in the EU countries. In: *Proceedings of the ENTRENOVA Conference*, 2018, pp. 186-194.
15. Westerman, G.; Bonnet D.; McAfee, A. *Leading digital: Turning technology into business transformation*. Harvard Business Press, Massachusetts, USA, 2014, pp. 133-153.
16. Ross, J.; Beath, C.; Mocker, M. *Designed for digital: How to architect your business for sustained success*. MIT Press, Massachusetts, USA, 2019, pp. 1-17.
17. Kane, G. C.; Palmer, D.; Phillips, A. N. *Achieving digital maturity*. MIT Sloan Management Review, Massachusetts, USA, 2017, pp. 1-30.
18. Sabbagh, K.; Friedrich, R., El-Darwiche, B.; Singh, M.; Ganediwalla, S. A.; Katz, R. A. Maximizing the impact of digitization. *The global information technology report* 2012, 20(12), pp. 21-33.
19. Legner, C.; Eymann, T.; Hess, T.; Matt, C.; Böhmman, T.; Drews, P.; Mädche, A.; Urbach, N.; Ahlemann, F. Digitalization: opportunity and challenge for the business and information systems engineering community. *Business & Information Systems Engineering* 2017, 5(9), pp. 1-8.

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