

# A Project Management Digital Disruption: A Tanzanian Perspective on Emergence of Digital Project Management Office

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## Abstract

The goal of this review paper is to provide a comprehensive overview of the various research studies that are conducted in the fields related to digital transformation. They examine the potential impact of these technologies on the performance of organizations. According to various authors, an organization's digital transformation strategy should involve various elements, such as planning, processes, and structural changes. These transformations can be carried out through a portfolio of projects that are designed to transform the organization. Project management offices (PMOs) are typically established by organizations to handle the various tasks and responsibilities associated with implementing digital initiatives. They are also designed to introduce new digital competencies in their respective fields. This article aims to highlight the importance of establishing a PMO as an integral part of the organization's design. The authors of this review paper argue that the extension of the domain expertise of traditional project management offices into digital ones can help organizations transform their operations. This paper describes the case studies of three Tanzanian companies that have successfully established digital PMOs.

## Keywords

Organizational Project Management, Organizational Design, Digital Transformation, Project Management Office

## 1. Introduction

The concept of digital transformation is a complex and multifaceted one that can affect various aspects of an organization's operations. The rapid emergence and evolution of new communication and information technologies, such as the Internet of Things (IoT), artificial intelligence, and big data analysis, has created a

huge opportunity for organizations to transform their operations (Bharadwaj et al., 2013; Matt et al., 2015). Various studies have also shown that this approach can help them develop new business models (Berman, 2012; Schallmo et al., 2017) and improve their culture (Fabac, 2021; Fuchs et al., 2019; Hartl & Hess, 2017).

The rapid emergence and evolution of new business models and information technologies, such as the Internet of Things (IoT), has created a huge opportunity for organizations to transform their operations. However, implementing these changes can be very challenging due to the complexity of the project. This paper aims to provide a comprehensive understanding of the various aspects of digital transformation and how it can help organizations develop effective strategies.

Although there are various perspectives and approaches that are commonly used in the literature on digital transformation, most of the time, it is usually implemented as a series of related projects or programs. According to a study conducted by the Project Management Institute, most organizations have a project management office (PMO) (Project Management Institute, 2017), that is responsible for overseeing the implementation of their digital transformation initiatives (Project Management Institute, 2013). PMO is an integral part of an organization's design and structure (Aubry et al., 2007). It also plays a crucial role in project management. The research conducted by different scholars on the role of PMO in modern organizations has revealed various perspectives (Aubry & Lavoie-Tremblay, 2017; Müller et al., 2013; Darling & Whitty, 2016) or (Hobbs & Aubry, 2010).

Some of the studies that have been conducted on the relationship between the design and implementation of digital transformation have focused on the role of PMO. Although the exact role of the PMO in the project has not been studied, it is widely believed that it can play a vital role in the success of digital transformation. The paper aims to provide a comprehensive understanding of the various aspects of digital transformation and how it can help organizations develop effective strategies. It also explores the factors that can make the PMO more effective in handling the requirements of digital transformation.

## **1.1. Previous Research**

### **1.1.1. Digital Transformation**

Over the past decade, various academic studies have been conducted on the various aspects of digital transformation (DT). Although it has the potential to transform the way society functions, it is also important to consider how it affects the people and organizations that are involved in it. This paper aims to provide a comprehensive analysis of the multiple aspects of DT and its impact on the future. The emergence of DT as a strategy has presented a paradigm shift in how IT and business strategies are conducted (Bharadwaj et al., 2013; Matt et al., 2015) or (Kane et al., 2015). Scholars have addressed the various aspects of this topic in the past few years. This has paved the way for the establishment of new research programs in the field.

Some of the prominent scholars who have addressed the topic of digital

transformation in the past few years include (Vial, 2019; Verhoef et al., 2021). They have proposed the creation of a multidisciplinary research agenda focused on the study of DT. The 7s model, which is a well-known design concept, can be used as an example of a DT strategy. One of the key components of this strategy is the recognition of the employees' skills. In Vial's (2019) work, the concept of dynamic capabilities is also acknowledged as a component of the research agenda. Similarly, in Verhoef's paper, the organization structure is regarded as a component of the research program.

In his paper, (Verhoef et al., 2021) proposes various ways that organizations can cope with the demands of digital transformation. These include adopting agile forms of organization, establishing digital functional areas, and separating business units. (Fabac, 2021) noted that major organizational transformations typically occur through design changes. In other words, the effects of digital transformation can be expected to be felt in the design of organizations.

According to McKinsey, about 70% of large-scale digital transformation programs fail to reach their goals (Bucy et al., 2016). Other sources also noted that many of these projects are not successful due to various factors. In this paper, we will discuss the various research topics that are related to the development of digital transformation and its implementation (Westerman & Davenport, 2018; Zobell, 2018). These include the design of an organization that can support the needs of digital transformation, project management, and methods that can help implement it.

### ***Approaches to the Development and Implementation of Digital Transformation***

According to some authors, digital transformation is a process that involves changing organizational structures and procedures (Verina & Titko, 2019; Vial, 2019; Zaoui & Souissi, 2020). This concept is justified by the need to identify and implement effective strategies and procedures to manage the transformations. In his paper, (Ulas, 2019) discusses the various adaptation processes that are needed to accommodate the changes brought about by the transformation. These include the establishment of new operational systems and the adjustment of the institutional framework.

In their paper, (Sousa & Rocha, 2019) noted that learning processes and innovative activities are the dominant processes in digital transformation. The concept of digital transformation as a process is not limited to learning and innovative activities. It can also be considered as a metaphor for the repetitive nature of business processes. For instance, if a company's processes are repetitive, their principles might lead to faster and cheaper operations. However, these principles do not prove to be the most important factors that can help successful digital transformation.

According to a 1996 article by Bullet point (Bulletpoint, 1996), the concept of business processes is defined as the sequence of activities, precise inputs, and predictable results. This supports the subprocesses and activity architecture view of digital transformation.

Various studies have been conducted on the concept of digital transformation

and its structural changes (Hess et al., 2016; Bilgeri et al., 2017; Fuchs et al., 2019; Fountaine et al., 2019). These studies also suggest that the implementation of this process requires a change in the organizational structure. In order to successfully implement the concept, the appropriate units should be identified and identified as the main pillars of the project (Hess et al., 2016).

Hess and colleagues (2016) explored the various structural interventions needed in the DT strategy. In (Ackermann, 2020), proposed the establishment of a digital initiative transformation office to support the implementation of digital initiatives. This unit would be responsible for developing and implementing policies and procedures related to the project.

The concept of digital transformation can be considered as a process that requires a defined set of activities that are designed to achieve a specific result. This is why it is important that the project's scope and resources are designed to meet the requirements of the project. A project in an organization is an exception just as much as it is an undertaking of digital transformation. Even though a project is an example of digital transformation, it should also be considered as an exception. According to some authors like (Bendor-Samuel, 2019; Gurusamy et al., 2016), the traditional design method (waterfall model) is not ideal for projects that are complex and dynamic. Instead, they suggest adopting agile methods for projects.

One of the most common factors that can be considered when it comes to adopting agile methods is the continuous development approach. This method allows the team to build a strong relationship with the end users and deliver a high-quality product.

Although the various approaches to digital transformation are harmonized and combined in practice, they should be considered as part of a comprehensive strategy to guide the organization's efforts in developing new digital products and services. The management's role is to create a strategy that will allow the organization to take advantage of the digital resources and improve its performance. A study conducted by (Kane et al., 2015) revealed that the importance of strategy is higher than technology when it comes to driving digital initiatives. In 2016, another study conducted by Deloitte and MIT (Kane et al., 2016), revealed that only 43% of the respondents agree with a statement that employees have the necessary skills and knowledge to implement a digital strategy.

### **1.1.2. Organizational Design and Organizational Project Management**

For over a decade, academic research has been focused on the study of organizational design. Two of the most common models used in this field are the 7s model by McKinsey and the Galbraith's Star (Galbraith, 2014; Lowell, 2008). These two frameworks include five elements of organizational design, as well as their relationships. The 7s model additionally consists of seven components, including the strategies, structure, staff, skills, and shared values.

Project management and organizational design are two of the disciplines that are commonly used in project-based organizations. Recently, Miterev and colleagues conducted a study on the topic of project-based design (Miterev et al.,

2017a). They found that the elements of the 7s model addressed to a lesser extent than those of the Star model. Although the paper did not discuss the holistic design of a project-based organization, it did not address the issue (Miterev et al., 2017b).

Establishing strong links between project management and organizational design is a goal of this field. It has been identified as a new research area. The concept of project management is a function of the research area that's focused on the study and design of organizational structures. It refers to the management of projects that involve the implementation of corporate objectives (Aubry et al., 2007).

The concept of project management is a function of the research area that's focused on the study and design of organizational structures (Müller et al., 2019) and Aubry and Lavoie-Tremblay (2017). It refers to the management of projects that involve the implementation of corporate objectives. The design of structures that are dynamic is also a central component of the concept of organizational design. Two of the main concepts that are commonly discussed in this field are the contingency theory and the dynamic capabilities (Fabac, 2017). The concept of organizational design focuses on the idea that the design solutions that an organization uses depend on the situation in which it finds itself. According to a study conducted by Eisenhardt and colleagues (Eisenhardt & Martin, 2000), the strategic and organizational routines that managers follow are the foundations of the design process

According to Davies (Davies et al., 2008), the dynamic capabilities of project management are the factors that enable organizations to deploy multiple projects and launch new innovations. They are also used to identify the optimal strategy and methods to develop new technologies. A study conducted by (Daniel and colleagues in 2014) explored the concept of dynamic capabilities in the management of information systems projects. They found that the ability to successfully lead, manage, and execute IT projects is a dynamic capability. A similar study conducted by (Killen & Hunt, 2010) utilized the learning theory of organizational design as a framework for the concept.

The two perspectives are related to the demands of the DT. For instance, the need for innovation in processes and strategies, as well as changes in corporate culture and organizational structure, are elements of the design process. One can also view project management as a function that's part of an organization's overall structure. According to a study conducted in 2017 (Project Management Institute, 2017), over 70% of organizations have a project management office as an organizational entity. PMO as an organizational entity covering OPM's function within an organization and its relationship with the corporate design was covered in papers of scholars like Aubry and Lavoie-Tremblay (2017, 2018). They used the theories of contingency theory to analyze the relationship between the design process and the management of projects.

### **1.1.3. Project Management Office and Its Role in Contemporary Organizations**

The project management office (PMO) is an organization that is responsible for overseeing the execution of projects and programs. It can be divided into various

types, such as organizational units, business units, divisions, and departments. [Aubry et al. \(2013\)](#) recognize the following types of PMO: a) Organizational Unit PMO/Business Unit PMO/Divisional PMO/Departmental PMO, b) Project-Specific PMO/Project Office/Program Office, c) Project Support/Services/Controls Office d) Enterprise/Organization-wide/Strategic/Corporate/Portfolio/Global PMO and e) Center of Excellence/Center of Competency. [Müller et al. \(2013\)](#) categorize PMO according to relational typology as servicing, controlling, and partnering. [Desouza and Evaristo \(2006\)](#) proposed an approach of classifying PMOs according to knowledge archetypes as a) supporters, b) information managers, c) knowledge managers, and d) coaches. In [\(Desouza & Evaristo, 2006\)](#) proposed a framework that categorized project management offices into four types: supporters, information managers, coaches, and knowledge managers. The first is an administrative dimension of the typology, while the others fall under a knowledge-intensive one. A study conducted by [\(Monteiro and colleagues, 2016\)](#) analyzed the academic literature about the project management office and came up with a dozen typologies. They used scientific databases such as Scopus and Web of Science to gather information about the organization.

In [\(Hill, 2004\)](#) defined the project management office as an organization that can eventually develop into a more mature structure. It can be divided into different types depending on its maturity. For instance, the project office could be regarded as the most immature type of organization.

A study conducted by [Hobbs and colleagues in 2008](#) revealed that the project management office played an important role in the innovation efforts of organizations. In [\(Artto and colleagues, 2011\)](#) discussed the role of the PMO in front-end innovation. They used various theories and approaches related to management control and organizational design.

Although PMOs, as an organizational entities in principle, last more than the projects they are responsible for, they are far from being considered stable organizational structures, so they are constantly exposed to tensions to change [\(Aubry, 2015; Bredillet et al., 2018\)](#). Because of this, it is constantly exposed to changes, these tensions or demands to change may come from the fact that PMOs failed to justify their purpose, given existing circumstances, or just because of the ever-changing nature of the business organization, as explained in contributions by [\(Darling & Whitty, 2016\)](#) or [\(Schibi, 2013\)](#). Due to the emergence of digital transformation, the need for project management professionals to have the necessary competencies to effectively implement and manage changes has increased [\(Hornstein, 2015\)](#). As the most common type of organization structure for project management, the project management office is also under increasing pressure to develop effective knowledge management and organizational learning programs. These are required in order to maintain continuous innovation and improve the efficiency of the organization. According to Ward and Daniel, the project management office is very important to an organization's success. In addition to being able to manage projects, it is also considered an integral part of the organiza-

tion's strategy. Despite the lack of evidence supporting a direct link between the design and function of the project management office and the DT, members of the professional community are still discussing this topic (Workfront, 2018). Due to the increasing number of transformational projects that require the involvement of the project management office, it is now more important than ever that the design and functional of the project management office are considered in terms of their contribution to the organization's success. This can be done through the evaluation of the various aspects of the project management office's role. There are various specializations within the project management office that are more important when it comes to addressing the needs of the DT's projects and programs. These areas of expertise can be utilized in the design of the project management office.

- Specializations in innovation management.
- Digital strategy.
- Knowledge management.
- Organizational learning can be utilized by the project management office.

These areas of expertise can help organizations implement and manage their digital strategy.

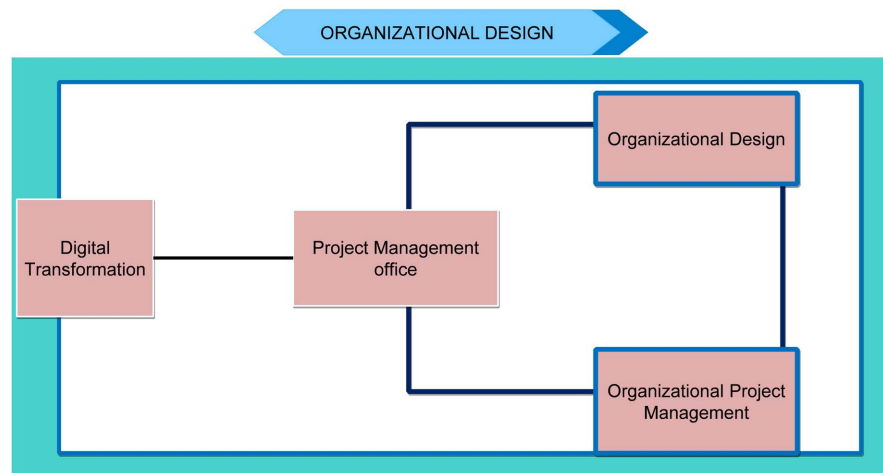
## 2. Research Gap and Research Questions

The relationships between the DT, PMO, and organizational design have been discussed in various academic sources. However, the direct link between the design and the PMO has not been observed. According to a 2013 article by Aubry and colleagues (Aubry et al., 2013), the current project (Cha et al., 2018) management frameworks are not designed to support transformational programs. They need to be replaced with more effective tools and techniques that can help organizations successfully manage their projects. These include innovation management, digital strategy development, and organizational learning (Müller et al., 2019; Aubry et al., 2017), and (Miterev et al., 2017a). A new model for the project management office (PMO) should be developed based on the contributions of various academic researchers. Due to the introduction of new elements into the design process for organizational structures and digital strategy, there is a potential gap in the knowledge about the PMO (Figure 1). These include the role of the PMO in implementing DT projects.

The design of the PMO as part of an organization is affected by the changes in its domains of expertise and competencies due to the DT. For instance, if the star model of Galbraith is used, then the design of the PMO (Galbraith, 2014) would be different from that of McKinsey's 7s model (Lowell, 2008).

To frame the exploration of this relationship, we proposed the following research question:

**RQ1:** What are the design features of a PMO that could successfully meet the requirements of DT projects? The research question was addressed using a qualitative method that was conducted on a sample of **Tanzanian** companies.



**Figure 1.** Relationships between DT, organizational design, OPM, and PMO in academic literature. Source: Author's work.

### 3. Methodology

This research aims to provide a theoretical framework for analyzing the various aspects of project management and organizational design, which are not subject to objective reality. However, it is constructed according to different interpretations and perspectives.

The case study method was chosen as the primary method for the research. This is because it allows the researcher to collect data on key stakeholders and questions related to the various aspects of organizational design and project management (Yin, 2018). The research process is also focused on finding answers to these questions through the use of case studies. The advantages of using a case study are that it allows the researcher to collect data on multiple aspects of the project management and organizational design process, and it provides a theoretical framework for analyzing the phenomenon. Although there are already theories that can explain the phenomenon (Eisenhardt, 1989), the findings of this research will be used to develop new theories.

The complexity of the research subject matter and the number of variables involved make it difficult for quantitative researchers to thoroughly analyze the data. The research sought to collect data on key stakeholder groups such as the directors of PMOs and other employees who have insight into the various roles and responsibilities of the organization's managers. A list of topics and questions was then prepared for the interviews.

- The dominant type of digital transformation and rationale for such a decision
- The roles a PMO plays in digital transformation projects
- Digital technologies used when implementing DT
- Fundamental PMO knowledge and skills required for successful implementation of DT
- Project management approaches used in a project DT



- Significant obstacles and risks in DT projects
- DT project performance compared to projects before DT
- innovations in PMO's work due to the implementational demands of DT - PMO's self-perception of being more digital than before DT implementation

The interviews were carried out in four Tanzanian companies in April and May 2022.

## 4. Results

The research participants were interviewed to collect information about three organizations. **Table 1** summarizes the data about the organizations, while the case studies are explained below

### 4.1. Case A—An IT Organization

Case study A is an information technology company that provides software solutions and services for the public sector. It has a reputation for being a leading provider of digital transformation solutions. Its operations are managed by a team of nine employees. Due to the company's digital transformation efforts, it has decided to adopt an organizational culture focused on sustainable value and customer satisfaction.

The company's digital transformation efforts are supported by the expertise of its PMO, which is regarded as a key player in helping organizations achieve their goals. This specialization allows it to create and manage effective knowledge distribution channels. The Prime Minister's Office (PMO) is responsible for overseeing the development and implementation of project management policies and procedures. It also manages the execution of projects and their related performance indicators.

The PMO's digital transformation teams are responsible for leading and monitoring various initiatives related to the advancement of technology, such as big data, cloud computing, and mobile. They have the necessary skills and knowledge to effectively implement and manage these projects. Despite the Prime Minister's Office's efforts to promote digital agility, it still relies on traditional project management techniques to carry out its projects. The lack of leadership, talent shortage, and resistance to change are some of the factors that prevent it from successfully implementing DT.

**Table 1.** General information about PMOs involved in research.

	Case A	Case B	Case C	Case D
<b>Industry sector</b>	IT	Banking	Banking	Telecom
<b>Position</b>	PMO director	Head of PMO	Head of PMO	PMO Director
<b>PMO size</b>	9	13	4	19
<b>Type of DT</b>	Cultural/ organizational	Business model(s)	Business process(es)	Cultural/ organizational

#### **4.2. Case B—A Business Bank 1**

One of the largest banks in Tanzania is using technology solutions to support its various business processes. The bank has a variety of projects that are aimed at improving its digital platforms. These projects are part of the bank's strategy to transform its operations. According to researchers, these activities are often linked to the implementation of digital transformation programs. The bank's primary project management office (PMO) is composed of 12 employees. It is a vital part of the organization and plays a leading role in the implementation of digital strategy. The structure allows the office to contribute to the shaping and definition of digital strategy.

Some of the bank's projects have been using cutting-edge digital technologies such as cloud computing, artificial intelligence, and mobile. The PMO has a variety of responsibilities that it can perform, such as strategic planning and execution, project management standards and methodologies, and leadership. Through its members, the PMO can help owners and sponsors of the projects maximize the value they receive from their projects.

The bank's project management approach is based on the DT hybrid system, which combines the rolling-wave planning and the waterfall approach. The waterfall method was used during the initial phase of the project, but it did not have a distinct set of phases. Instead, it focused on carrying out all the analysis and testing activities at the same time.

According to the bank's head of the PMO, the bank's new project management approach was designed to be more agile. It also supports the use of a hybrid approach, which combines the traditional planning and execution methods. This method was adopted due to the bank's need to manage multiple regulatory projects. The hybrid approach allows the bank to focus on its core business while maintaining its flexibility.

Even though the project's expected end date is still unknown, it can be assessed at any time. The bank can also consider various factors such as the impact on the budget and the risks involved. The bank's project management office is often faced with the challenges of implementing a digital strategy due to the complexity of the project. In addition to the lack of project-specific leadership, the bank's regulatory requirements also affected the development of business activities.

#### **4.3. Case C—A Business Bank 2**

One of the largest banks in Tanzania is involved in this case. It decided to focus on digital transformation as its main change model. The bank noted that its business processes are the most critical factors that need to be changed in order to transform its operations. The bank has four employees who are responsible for the management of its digital initiatives. The role of the PMO is to ensure that the organization's strategy and procedures are aligned with the goals and objectives of the project. It also has the necessary skills and knowledge to man-

age the various aspects of the project.

The bank's PMO has the necessary knowledge and skills to effectively implement digital technologies. This is different from the other two cases. The bank's digital transformation projects were carried out using various technologies, such as mobile computing. These technologies were also used for business process management and development operations.

The bank's project management approach is hybrid and agile. However, it is still not ideal for implementing digital strategies due to the lack of leadership and the resistance to change.

#### **4.4. Case D—A Telecom Company**

One of the largest telecommunications companies in Tanzania is currently undergoing a digital transformation. Similar to case A in this case, the company decided to focus on its customers and the sustainable value proposition of its business processes. The director of the PMO noted that the company's digital transformation has primarily been carried out through agile transformation. The company's PMO has 19 employees. It is regarded as one of the organization's support units for agile transformation.

The company's projects are heavily affected by the various digital technologies that are currently being used in the development of its operations. Some of these include artificial intelligence, big data, cloud computing, and social networks. The company's PMO has a strong knowledge of project management techniques and procedures. It also has the necessary expertise to effectively manage the various aspects of its projects. In addition, it is able to implement a hybrid approach when it comes to project management. This is because the organization has a unique set of skills and knowledge that it can use to implement its digital strategy.

### **5. Discussion**

The goal of this study was to explore the various design features of the Prime Minister's Office (PMO) that could be used to meet the requirements of digital transformation projects. The findings of the research will be used to develop a strategy for addressing these issues.

#### **5.1. PMO Design Changes**

The concept of transformation (DT) refers to an organizational design process that involves the change of various components of an organization's structure, processes, and culture. For instance, the design of the Project Management Office (PMO) is subject to change as a result of the requirements of the DT. Some authors also emphasize the importance of the design of the PMO to ensure that it is designed to meet the requirements of the various project management standards.

The concept of transformation refers to the process of change that occurs as a

result of an organization's external and internal drivers or events. According to Auburn et al., in 2010, DT can be considered as a case of PMO transformation. This research also shows that organizations that have multiple innovations in the PMO are more likely to benefit from its transformation. In addition to focusing on agility, the goal of Company C's DT projects is to develop new technologies and innovations in the project management industry. They also seek to provide support for strategic initiatives. The statements of the respondents regarding the success of the project and the capabilities of the PMO are very important for the development of a digital strategy.

According to various studies, the development and implementation of a digital strategy is one of the most critical factors that organizations need to consider when it comes to their digital transformation. The design of the DT for each organization is different. This is because the requirements of the different roles and responsibilities of the PMO vary depending on the organization's business model and culture.

## **5.2. Knowledge and Agility**

The Prime Minister's Office (PMO) is an important organization that needs to have the necessary skills and knowledge to support its digital transformation. This can be done through the development of a strategy and the implementation of effective digital agility. Besides being able to manage their own projects, the staff members of the organization also need to have the necessary skills in communication and management.

According to a study conducted by Kane and colleagues in 2015, the three main factors that organizations need to consider when it comes to implementing digital transformation are planning, agility, and strategy. Despite the importance of having the necessary knowledge and skills to support the implementation of digital transformation, the perception of the PMO's staff members regarding the role of technology in the project is not widely acknowledged. According to Hess and Hartl, their study revealed that the willingness to learn and the openness to change are some of the factors that contribute to the success of digital transformation.

The study also revealed that although all four of the surveyed PMOs adopted the agile approach to managing projects, only case C had a positive perception of its capabilities and benefits. These organizations believed that the agile approach can lower their project costs and improve their project outcomes (**Table 2**).

The statements made by the companies regarding their distinct attributes were found to be overlapping. These include the roles of the PMO and the staff members, the approach to managing the project's obstacles, and the knowledge and skills that the staff members have. It could suggest that there are invariant competencies related to the design of the PMO.

## **5.3. Digital PMO**

According to Kozarkiewicz, the most critical factors that project managers need

**Table 2.** Factors affecting PMO design in the cases covered for DT initiatives.

	Case A	Case B	Case C	Case D
<b>Type of DT and experience with DT technologies</b>	Cultural/organizational Mobile computing, cloud computing, social networks, big data	Business model(s) AI, mobile computing, cloud computing	Business process(es) Mobile computing, BPM, robotic process automation	Cultural/organizational AI, mobile computing, cloud computing, social networks, big data, IoT
<b>Key PMO roles</b>	Implementing digital agility Knowledge management	Implementing DT strategy Change management Contributing to DT strategy definition	Implementing DT strategy Implementing digital agility Knowledge management	Agile transformation of the company
<b>Fundamental PMO staff knowledge and skills</b>	Strategic and operational planning PM standards and methodologies Communication and motivational skills	Strategic and operational planning PM standards and methodologies Communication and motivational skills Leadership Knowledge about the business domain	Strategic and operational planning PM standards and methodologies Knowledge of digital technologies Communication and motivational skills Leadership	PM standards and methodologies Communication and motivational skills
<b>Project mgmt. approach</b>	Traditional Hybrid	Hybrid	Hybrid Agile	Hybrid
<b>Main obstacles in DT strategy implementation</b>	Lack of leadership Resistance to change Staff shortage	Lack of leadership Resistance to change Regulatory demands	Lack of leadership Resistance to change	Staff shortage
<b>Performance assessment in DT projects vs. “regular”/ “traditional” projects</b>	No significant change	No significant change	Somewhat more successful	No significant change
<b>Innovations in PMO’s work due to DT</b>	Introduction of an agile/hybrid approach Improving control and coordination between project managers and projects	Agile PM	Agile PM and agile org. forms/structures Innovation PM Digital strategy implementation Use of digital technologies in organizational transformation Management support on strategic DT projects	Agile PM
<b>DT caused PMO to be more “digital.”</b>	Neither agree nor disagree.	Agree to some extent	Agree to a large extent	Agree to some extent
<b>DT caused PMO to be more “digital.”</b>	Neither agree nor disagree.	Agree to some extent	Agree to a large extent	Agree to some extent

to consider when it comes to digital transformation are data, systems, communication, and agile methodology. Through a case study, we were able to identify the various factors that have contributed to the transformation of the project

management organizations (PMOs) in Tanzania. The study also revealed that the units of the country's companies that are involved in digital transformation have significantly changed their activities.

The study also revealed that the increasing number of digital transformation projects has led to a better perception of the role of the project management organization in the country. However, the representative of one of the companies noted that the performance of the projects in digital transformation was not significantly different from that of traditional projects.

The study also revealed that the increasing number of digital transformation projects has led to a better perception of the role of the project management organization in the country. The director of Case D noted that the emergence of agile methods has led to the transformation of the company's operations. He said that although the use of digital technologies is not a central component of the company's digital transformation strategy, it is still important to consider them as part of the company's overall business strategy.

Based on the study's findings, the project management organizations in Tanzania need to develop more effective and efficient ways of handling the various tasks and responsibilities related to the implementation of digital transformation projects.

#### **5.4. The Success of the PMO in Implementing DT Initiatives**

The results of a case study assessing the performance of a project involving the use of DT technology were not significantly different from those of a traditional project. However, there were some innovations that were brought about by the use of DT in the project, such as the establishment of a hybrid and agile approach to managing projects. The interviewee of company B noted that the DT projects were not significantly different from other initiatives when it came to duration, costs, outcomes, and other factors. The agile approach to project management was regarded as the most important innovation in the work of the PMO. As for case B, the interviewee believed that the digital transformation of the PMO eventually occurred.

In Case C, the respondents noted that the performance of the DT projects was better than that of the other initiatives. They also believed that the projects were more cost-efficient and shorter. Recent studies (Bucy et al., 2016; Libert et al., 2016), that looked into the performance of digital transformation projects revealed that they were not as successful as other initiatives. However, the results of this survey suggest that the success of the DT projects can be maintained even if the overall performance of the organization is not as good as that of other projects (Svahn et al., 2017, Deloitte, 2020; Sutcliffe et al., 2019). This is because the success of the project is mainly based on the capabilities of the project management office (PMO).

The results of the study indicate that the use of digital technology in the project management office has a positive effect on the organization's perfor-

mance. In a case study, the organization C shows that the use of digital technology has significantly increased the efficiency and effectiveness of its project management office. However, it is important to note that this is an isolated example and that more research is needed to analyze the various factors that affect the success of the project management office. The main factors that prevent organizations from implementing the digital transformation strategy are the lack of leadership and the resistance to change. This is consistent with the findings of several studies that have been published in the past couple of years.

Although the results of the study were obtained through a multiple case study, it is not enough to provide a comprehensive analysis of the various factors that affect an organization's decision-making process when it comes to implementing the digital transformation strategy (Yin, 2018; Eisenhardt, 1989). This research can only be considered as a preliminary study due to the small number of variables that were used in it. Additional variables should be included in future research to provide researchers with a deeper understanding of the project management office's operations.

## 6. Concluding Remarks

The various approaches to implementing and developing digital transformation are not always clear. There are also varying experiences and theoretical perspectives that can help determine which approach is most appropriate. For instance, the preferred method for project management involves the use of the PMO.

The design of the PMO, which is the most common type of organizational structure used for managing projects, portfolios, or programs, must undergo significant changes due to the transformation of an organization. The use of this type of structure has become a central focus of digital transformation efforts as it can help support the successful execution of programs and projects. After conducting several case studies on the use of the PMO in Tanzania, we learned that the key factors that organizations consider when it comes to implementing digital transformation are the knowledge of project management techniques and the implementation of a hybrid approach.

Many companies in Tanzania with project management offices (PMO) are facing various obstacles when it comes to implementing the digital transformation strategy. These include the lack of leadership and the resistance to change. The findings of this study provide guidelines on the design features of an effective PMO that can meet the requirements of digital transformation projects. The study also explored the relationship between the design features of a project management office and the requirements of a digital transformation project. In order to transform the structure of the PMO, new competencies should be developed in the areas of expertise and digital projects.

The results of the study were then analyzed and compared with the theoretical perspectives and practical contributions of other researchers. These findings led to the development of a further theory focused on the role of the PMO in trans-

formational projects. In addition, the research findings and recommendations can be used to develop a framework for the design features of the PMO as part of an organization's overall transformation.

## Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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