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MASTER OF BUSINESS MANAGEMENT

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MASTER THESIS

Skaitmeninės transformacijos panaudojimas siekiant poveikio: verslo procesų pertvarkymo labdaros organizacijose tyrimas.	Harnessing Digital Transformation for Impact: A Study of Business Process Reengineering in Charitable Organizations.

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INTRODUCTION

Relevance of the Topic

The digital age has ushered in an era of profound transformation, influencing various sectors worldwide, including charitable organizations. Charitable organizations, known for their altruistic missions and social impact, are increasingly facing the need to embrace technological advancements to stay relevant, effective, and efficient in a rapidly evolving world. Digital transformation provides these organizations with the tools and approaches that would improve their organizational processes, outreach, and resource utilization (Cipriano & Za, 2023). Business Process Reengineering (BPR), which is a long-standing strategic approach to change, has a major responsibility in this process and in making sure organisations do not simply automate inefficient processes but redesign their processes (Afnan et al., 2022). When implemented within charitable organizations, BPR can reduce complexities and redundancies, thereby increasing efficiencies of resource utilization, which in turn, increases donor confidence and improves the accountability of charitable organizations to their stakeholders.

Most charitable organizations are financially limited which means that the processes they employ in the organizations must be as efficient as possible for effectiveness. With the assistance of BPR that integrates the use of digital tools, organizations can minimize the time spent on administration, enhance the communication with stakeholders, and establish more versatile means of interacting with all the affected communities. For instance, digital tools such as cloud computing, data analytics, and customer relationship management, (CRM) have already shown positive impacts in businesses. When used in the charitable organizations, this type of application has the capability to bring about a revolution in the provision of services, and also in the way the engagement of the donors is handled (Jong & Ganzaroli, 2024). Thus, digital transformation through BPR is not a mere option but a compelling reality for charitable organizations seeking to expand their impact within the society.

Level of exploration of the topic and scientific problem

Charitable organizations, while often slower to adopt digital transformation, are beginning to recognize its potential to streamline operations and enhance service delivery. Gooyabadi et al., (2023) argued that, emerging technologies like cloud computing, analytics, and automation can significantly enhance the effectiveness and operations of non-profits.

Implementing these technologies via BPR and evaluating the impacts of such integration have demonstrated positive results with objectives of cost and resource reduction (Kaponda et al., 2023). For instance, BPR can facilitate the redesign of business processes enabling organisations to achieve faster decision making and enhanced donor interaction (Afnan et al., 2022). Nevertheless, Al Najjar et al. (2022) highlighted that the non-profit sector has internal factors as well, including a lack of funding, technological knowledge, and resistance to change, which limit the extra benefits that can be achieved with the help of digital transformation. Therefore, despite the fact that digital transformation for non-profits offers significant opportunities, the strategies used in it needs the Business Process Reengineering framework.

A lot of charitable organizations however lack the necessary tools needed to explore crucial changes through Business Process Reengineering (BPR). This study will unearth the scientific problem of determining how charitable organizations can put in place BPR practices by the use of digital transformation mechanisms. Although a number of works centre on the efficiency enhancement of non-profit organizations through the use of technology (Al Najjar et al.,2022), the application of BPR to enhance processes in charities currently lacks sufficient research. Similarly, there is limited research evidence regarding the effects of digital transformation on the performances of these firms in terms of operational and financial performance (Gooyabadi et al., 2023). This gap opens up the research question of how charitable organizations can leverage digital tools to redesign the services they deliver for enhanced social benefits.

Novelty of the Master's Thesis

Digital transformation and business process reengineering (BPR) have in the past few years been largely researched in the context of private and public enterprises, whereas studies addressing the role of digital transformation and BPR in charitable organizations are scarce. Non-profit organizations are important contributors to solving social issues, however, their infrastructural development and functionality do not always afford the usage of the most recent, advanced technologies due to limited funding and rigidity in embracing change (Jong & Ganzaroli, 2024). There is limited research in literature on how digital transformation is associated with the performance of charitable organization. There is especially a gap whereby the BPR concept has not been examined within the non-profit organizations sector. Thus, this research focuses on how

the concept of digitalisation for charitable organisations can be further explored to strategically enable BPR, filling the existing gap and presenting a new angle to a still emerging field.

This research intends to address the most important aspect which is, the manner in which technology, on the one hand, and process redesign on the other are managed in non-profit organisations which work under conditions different from those of for-profit entities notably with regards to measuring impact, effectiveness and resource optimisation. Charitable organizations exist with the aim of delivering social good as a key objective and not necessarily financial returns and thus are faced with different prospects and challenges when applying BPR models (Al Najjar et al.,2022). By addressing the specific financial constraints, technological limitations, and operational challenges faced by non-profits, this study provides new insights into how digital transformation can be a powerful tool for maximizing social impact. Besides, applying classical BPR frameworks to the non-profit context, this study also identifies new success factors, which include increased donor satisfaction, improved beneficiary returns, and organisational viability.

Aim and objectives of the study

The aim of this study was to examine the relationship between BPR and the efficacy of harnessing digital transformation in bringing about better outcomes from various business processes involved in charitable organizations.

Objectives

1. To theoretically reveal the current state of digital transformation within charitable organizations and identify key areas of improvement.
2. To theoretically reveal the concept of Business Process Engineering in literature.
3. To empirically investigate how Business Process Engineering by use of digital transformation impacts operations in within non-profit charitable organizations
4. Reveal the challenges and barriers faced by charitable organizations in implementing digital transformation initiatives.
5. To provide recommendations for best practices in leveraging digital transformation to enhance business processes in charitable organizations.

1 THE ANALYSIS OF SCIENTIFIC LITERATURE ON DIGITAL TRANSFORMATION FOR IMPACT IN CHARITY ORGANIZATIONS

1.1 Digital transformation

DT in charitable organizations presents a new way of solving some of the main issues and enhancing the delivery of services, productivity, and capability to fulfil social functions. According to Nikita et al. (2024), digital tools are considered crucial for increasing the effectiveness of such organizations, but the process has its challenges, particularly due to the nature of non-profit organizations. This relative awareness has led charitable organisations to acknowledge the fact that digital solutions can complement their mission-based operations such as fundraising, volunteer management and service delivery.

Non-profit organizations have realised the importance of using technologies to transform the way they operate independently and involving volunteers. Freitag & Hämmerle (2022) presented a process model called the "Volunteering Service Engineering" for digital collaboration in Non-Profits and indicated how volunteers can actively engage through collaborative platforms and Video Conferencing Tools. The modern model helped organizations to reach volunteers regardless the time and utilize the potential of youth using the applications and forums created especially for them. Likewise, Fakhruddin and Novani (2023) pointed out the business opportunity through digital interfaces that can build synergy between organizations and donors. Co-creation facilitated by stakeholders to collaboratively deliver value that characterized service enhancement and authentication. Such technologies help in the possible transparency in the flow of funds where donation received and donated are disbursed and reported especially important to charity organizations and institutions.

Digital transformation in charitable organizations also creates opportunities for innovation and new market employment models. Technology including online platform systems offers several opportunities to charities that help them revolutionize their performance and even extend their outcome. Cipriano and Za (2021) have pointed out that digital transformation has the potential of greatly improving the strategic development of non–profits in terms of establishing value–creation networks supporting the creation of value–creating structures in non–profits. Likewise, Gooyabadi et al. (2023) specifically designed a sequential framework for evaluating the maturity of the digital environment of an organization, which is relevant in ascertaining their appropriateness for a broad-

spectrum digitalization. Through constructing an integrated strategic solution framework, one can successfully address the intricacies involved with technology adoption and enhance organisational digitisation in line with societal requirements.

Digitalization is also vital in solving global issues, for example the achievement of the sustainable development goals (SDG's). By using digital tools, charitable organisations can enhance their ability to support these objectives and particularly, in cases of addressing food waste and poverty. Jong and Ganzaroli (2024) recognized how The Felix Project in London has implemented digitalisation to serve the society more efficiently in the case of hunger, which shows that organisations cannot overlook the role of technology in achieving SDG 2 – Zero Hunger. Voluntariness, leadership, entrepreneurship and an easy-to-use concept is important when it comes to such efforts. Cipriano & Za (2023) also postulated that non-profits will be particular pioneers of the social good in digital transformation because the kinds of returns that they seek are less oriented on financial, more inclined on non-financial as we see in the context of the SDGs.

As a result, COVID-19 has become the impetus for the transition to the digital environment and the use of digital technologies by charitable organizations. Kulkova (2021) pointed out that due to COVID -19, there is a sharp increase in the digital transformation process mainly with socially oriented non-profit organizations. As a result of the crisis, several organizations expanded their online platforms, and they pivoted to delivering as many services as they could online. In fact, 25 per cent of socially oriented non-profits escalated their digital engagement during the pandemic, which emphasises the reception of the external environment and a consequent change of the digitalisation process (Kulkova, 2021, O'Grady & Roberts, 2019). This shift not only enabled them to sustain their operations but also extend the outreach of their services and enhance their accomplishment. Along the same vein, Brink et al. (2020) posited that the COVID-19 pandemic illustrated the relevance of enabling non-profit organisations to adapt to the use of information technology for sustainability in dispersion in cascades by implementing a model that enable the operations of the non-profits by breaking the chain of the lockdown and social distancing measures.

External factors that affect the digital transformation of non-profits also include businesses especially through their corporate social responsibility (CSR) programs. Sometimes, businesses take the responsibility and lead non-profit organizations toward the digital world as many companies provide their technologies and knowledge under CSR initiatives (Kulkova & Sabirova,

2022). This reality has been particularly apparent in service-sector enterprises, where corporate backing assists in the intensification of the utilization of digital resources. Yet, the degree of digitalization differs within the sector as some organizations are faster adopting technologies than others due to the availability of resources and partners (Kulkova & Sabirova, 2022).

However, there are some hurdles which organizations and especially non-profits have to face for the purpose of digital transformation. Several challenges have been named as relevant to successful digital transformations in charitable organisations, including financial risks, cultural concerns, and limitations in technical capabilities (Nikita et al., 2024). These issues implied the necessity of using specific strategies which would correspond to the goals of the organization. O'Grady & Roberts (2019) agreed with the sentiments noting that the challenges affecting Irish non-profit organisations include limited funding, resource constrains and skills deficit. Nonetheless, synthesizing the findings of the herein research, it can be stated that while many organizations struggle with these challenges, it is possible to increase the efficiency and strategic application of technology within the sector, but a profound digitalisation remains unachieved.

1.2 Business Process Reengineering (BPR)

BPR frameworks and methodologies offer an organisation an identified structure to guide through the reengineering process. Among them, perhaps the most recognised is Hammer and Champy's approach that consists in recognising strategic business processes, assessing their problems, and constructing new work designs to correspond to the business need (Hammer & Champy, 2009). According to Sudha and Kavita (2019), this model has been successfully used in the banking industry to address back-office issues whereby, processing time has been cut and customer service enhanced. Another widely used methodology is Davenport's Process Innovation Framework in which Technology is identified as critical for enabling reengineering efforts (Davenport, 1993). This framework has been effectively used in organizations like the telecommunication sector, where digital tools have been used to facilitate bill payment and customer communication (Plahotnikova, 2019). These frameworks are useful in specifying tangible measures for organizations that wish to undertake process reengineering exercises, and want to foster efficiency.

Strategic changes undertaken to redesign business processes may be directed at optimizing organizational performance through decreasing costs, increasing organizational velocity, and improving the quality of services delivered. According to Akang (2024), BPR aided in the

enhancement of process efficiency as a result of a revolutionized perspective by eradicating superfluous activities that pertain to the reorganization of processes within an organization. Al-Shammari (2023) argued that reengineering is fundamentally a managerial philosophy with the purpose of redesigning existing processes and comparing them to the organizations' larger objectives. These changes lead to cost-effectiveness, efficiency in service provision, and improved quality of results placing businesses in a vantage point where it can deliver services to customers with efficiency within a competitive environment. Out of the many reasons that continue to motivate the BPR strategy, the focus on service quality and operational efficiency stands out.

There are many examples of successful BPR implementation across various industries which can be another useful source of information for organizations who decided to embark on the journey of business process reengineering. According to Zaini and Saad (2019), BPR is characterized as a strategic approach with the aim of helping organizations improve existing processes and achieve cost reduction and high service quality goals. BPR frameworks commonly incorporate process tools including; process mapping; workflow analysis, and change management tools to help organisations through the reengineering. Wang (2024) agreed with the perception of comprehensive reengineering that deals with the enhancement of processes, structures, and culture in order to optimize the success of reengineering. Due to this flexibility, the BPR methodologies have been used by various organisations in fields such as healthcare and manufacturing, where enhanced performance through proper planning and implementation has been achieved.

The use of BPR has been effective across almost all industries starting from the health care sector to the services industry as it provides organizations with possibilities of dealing with current technological and market challenges. For instance, Aldakhil (2016) highlighted how BPR was applied in a Saudi Arabian hospital to introduce an Enterprise Resource Planning (ERP) system which paved way to increase on both patient and personnel satisfaction. This proves how through BPR integrating with technology, such humane fields such as health-care can be transformed. Cultural changes and technological solutions are identified by Dagher and Fayad (2024) as the enablers of BPR, especially in micro, small, and medium enterprises (MSME) contexts. They explain how organisations can use BPR to enhance profitability and increase staff satisfaction since the method is directed towards eradicating or minimising inefficiencies at the organisational level and encouraging process enhancement.

Different industries use BPR in different ways because it depends on the methodologies that are suitable for the industry's operations. Patrucco et al. (2020) argued that BPR has been applied in manufacturing where such matters as redesign of supply chains have, for example, led to shorter lead times and lowered inventory costs as experienced by Qu et al. (2019). BPR has also been applied to the automotive industry; For instance, Toyota applied the BPR theory in its production system by eliminating what it called 'waste' in the manufacturing process and adopting lean manufacturing as a way of improving the quality of the cars it produces (Uchena & Joel, 2021). On the other hand, the financial services sector has employed BPR in specific areas where it impacts the customer interactions like, loan processing time and accounts management as noted by Nkurunziza et al., (2023). These examples shows that the approaches employed in BPR methodologies are adopted based on the needs of specific industries; thus, indicating the versatility of reengineering across industries.

One of the critical components shaping the outcomes of an enterprise's BPR initiatives is the aspect of technology acting as an enabler for process automation and data decision making. Davenport (1993) have also noted that for the reengineered work processes to be fully effective, IT support needed to be incorporated into the processes. For example, in banking sector technology has helped organizations to eliminate staff-based routines, minimize errors and offer enhanced services to customers (Sudha & Kavita, 2019). Likewise in the logistics industry, BPR with the help of advanced IT solutions have enabled effective flow of shipments and coordination across the logistics chain thereby real time tracking of shipments (Li & Nazif, 2022). These examples clearly depict the importance of technology when it comes to the actualization of the process of reengineering.

Therefore, Business Process Reengineering can be defined as an effective approach to bringing fundamental changes to organizations aiming at cost, quality and speed of service delivery. Due to new and innovative perspectives on the design of work and tasks, organizations, including charitable organizations, can reduce non-value-added activities and improve them to be in tune with the organization's strategic direction.

1.3 Intersection of digital transformation and Business Process Reengineering

Digital transformation plays a pivotal role in enabling Business Process Reengineering (BPR) in charitable organizations, offering innovative pathways to improve operational efficiency and service delivery. By adopting digital tools such as automation, cloud computing, and artificial

intelligence (AI), nonprofits can overhaul their traditional processes to achieve dramatic improvements in performance. As per Jovanoski and Malinovski (2016), digital transformation provided a chance to redesign the organizational structure by addressing areas of improvement thus, decreasing the ineffectiveness of operations and increasing the pace at which organizations can adapt to change. In the same vein, Filuk and Lisova (2023) pointed out that digital transformation makes valuable contributions to the reengineering of crucial processes, which charitable organizations can use to optimally allocate resources and enhance their influence on the communities they operationalize.

Technological advancements such as automation, cloud computing, and artificial intelligence are central to enabling BPR in charitable organisations. Automation enables little or no human interferences with a number of operations that may otherwise require a lot of staff's time. Hashem (2020) proved that demonstrations and communications, donor perspectives and reporting, and record accuracy could be enhanced when administrative tasks including donor management and reporting were automated to cut down the operational costs for the charitable organizations. Also, Hasnan et al. (2017) noted that the advantages of cloud computing make it possible for charity organisations to get what they required in terms of resources in terms of scalability but they do not need to have massive investments in the diverse resources that they would need for such purposes. Cloud solutions help introduce the real-time providing mechanisms required to ensure the communication of various departments and quick adaption to changes. AI, on the other hand, enables charitable organizations to customize its interactions with the stakeholders by ascertaining donor's behaviour patterns and the technique that will maximize fundraising efforts. All together these technologies do change the way of operation of charitable organizations making BPR processes more effective.

Some of the charitable organizations that have embraced the implementation of BPR to enhance the integration of modern technology have recorded satisfactory organizational performance and effectiveness in the management of its stakeholders. Sungau and Msanjila (2012) indicated that qualifying charitable organizations that implemented reengineering initiatives in its workflow obtained increased transparency and optimised resource management. Through the use of IT, these organizations were able to simplify management of the organisations' donors and increasing the means of communication with beneficiaries. Similarly, Gooyabadi et al. (2024) pointed out that charitable organizations can continue to effectively manage stakeholder

relationships if only they embrace digital transformation as a way of enhancing their data management and reporting systems. These findings suggested that while general BPR projects aim at improving the digital operations of organizations, the social initiatives accomplished by these programs focus on increasing accountability and transparency of those organizations to the donors as well as the beneficiaries.

The application of information technology (IT), cloud systems, web applications, and social media as part of charitable organizations information technology infrastructure forms the core of reengineering processes. As Lee et al. (2011) mentioned IT deliver the technology enabler that allows a radical redesign of the business process to create incremental gains in efficiency, cost reduction and improved service quality. This was further supported by Al Tal et al. (2020) who noted that IT has a major influence on the tendencies to reduce tasks' complexity, redesign process maps, and assist charitable organizations in reconstructing their systems to attain better performance levels. To the charitable organizations these innovations have potentiality of managing effectively the donors and other related issues, proper use of the available resources as well as offer efficient service delivery to the beneficiaries.

BPR, and more specifically the integration of digital technologies in BPR, also affords charitable organisations the chance to advance several key factors for donor trust such as transparency and accountability. According to Ahadi (2004), through IT the organisations were able to assess the effectiveness of the reengineered process. This is much critical to the non-profits as the donor confidence is much related to how efficiently an organization mobilizes resources. According to Gooyabadi et al. (2024) stated that non-profit organisations benefitted from the digital transformation both by providing real-time reporting and accountability, thus, gaining donor's trust. Characteristics such as accountability and transparency reveal that through the adoption of IT in their BPR strategies, charitable organizations can offer donors positive insight of how their contributions are being used hence continuous support.

Digital transformation goes hand in hand with BPR as it helps charitable organisations to expand the sphere of their activity and attract more people. As mentioned by Filuk and Lisova (2023), the application of technologies achieved the goals of organizations since it enabled them to diversify and reach a large number of people through online platforms and tools that help automate numerous processes, including fundraising and service delivery. This is especially so in the current world where donor convenience and the use of technology is highly valued. This view

is supported by Olalla (2000) who stressed the idea that IT made it possible for organizations to redesign their business processes in ways that enhanced their capacity to accommodate growing demand. For charitable organizations, this means the ability to communicate with and attract more people and be efficient with the delivery of services to the targeted populations.

BPR helps charitable organisations to effectively work by eradicating the wasteful steps and incorporate technologies that enhance the flow of operations. According to Afnan et al. (2022), the new technologies like IoT and automation can mean improvements in the organization workflow, quicker decision-making processes, and more effective utilization of resources. In charitable organizations, such technologies can be applied to help in volunteer scheduling, filing and record-keeping among other processes or tasks as a way of reaching out and communicating with the beneficiaries. Ramirez et al. (2010) also stated that IT enabled BPR increases productivity and market value to organizations because promise the organizations to change environments. This sustenance is especially important to charitable organizations because charities must change and adapt in order to serve their missions and as organizations.

Business Process Reengineering (BPR) also promotes information technology for digital transformation as a significant approach to enhancing the performance of charitable organizations. According to Attaran (2004), BPR was enhanced by IT as a tool that provided capabilities for redesigning inefficient processes, increasing operational efficiency and enhancing service delivery. When adopted, IT enables charitable organizations to ease workload burden by automating common tasks, thus lowering overhead expenses and improving service delivery to beneficiaries. Kafi and Adnan (2022) further mentioned that the implementation of IoT conjunction with IT enables organizations to enhance the effectiveness of their procedures on their own. In charitable organizations these advancements may result to better results in data collection, monitoring resources in real time and better coordination between branches thus enhancing productivity and accountability. The findings revealed that IT-enabled BPR brought significant change to the ways that charitable organisations operated, helping the organisations to function in the face of a highly competitive and constantly evolving technological environment, all while keeping their eye on their intended goals.

1.4 Technological innovations shaping charitable organizations

Technological developments are revolutionizing charitable organizations, specifically in areas of increasing functionality, reaching out to beneficiaries, and eliminating bureaucracy.

Among all the impacts of technology to the nonprofit organizations, volunteer management has received a significant blow. Another study by Chui and Chan (2019) focused on how technology has impacted volunteer recruitment and matching as a process where the pool of volunteers has been enlarged and the kind of volunteer assigned to the task is more exact. Nevertheless, there are still some issues – for example, oppositions from the frontline workers. Likewise, Kamal (2020) noted that through information and communication technologies (ICTs), such as the use of mobile applications, social media, and online surveys, they are managing volunteer and donor data as well as tracking client interactions and financial accounting improving overall efficiency despite the lack of technical capacity.

Technology is one of the most crucial enablers that support the functioning of nonprofit organizations and the improvement of their operations. In his article Boles (2013) stated that new technologies and tools such as cloud computing, social media, and mobile technologies have impacted the nonprofit organizations' service delivery, fundraising practices, and outreach activities. These technologies facilitate the functions within the nonprofits, enhance the relations with the donors and stakeholders and enable the nonprofit organizations to deliver improved services with better resource mobilization and hence better resource utilization. Subsequently, Bobsin et al. (2019) built on the notion of technology affordances that highlight the possibilities of enhancement facilitated by the technological tools of nonprofit management. According to

Bobsin et al. (2019), technology improved operational efficiency by enhancing the decision-making processes of a nonprofit organization and helping to align the activities of these organizations with their social missions. Applying technology affordances allows nonprofits to improve their work for addressing social missions enhancing internal efficiency too. Collectively, technology is seen as a critical enabler of organizational performance and mission delivery in the nonprofit organizations.

Non-profit organizations have increasingly relied on social media and other digital marketing technologies in their work to help them reach out to stakeholders. In their study, Krueger and Haytko (2015) explained that the use of digital marketing communication initiatives has created new ways through which nonprofit organizations can mobilize support from donors and volunteers as well as enhance brand recognition. Through the implementation of Web 2.0 technologies, the organizations were able to foster two-way communications with their stake holders, both donors and beneficiaries, thus strengthening their bond. Maguire (2016) expanded

on the same by showing that, through social networking sites, for instance, the nonprofits are able to communicate to different demography in support of their agendas unlike in the past when their reach was largely limited.

Technology is also bringing about change in the non-profit fundraising approach. In their study, Jaskyte (2012) pointed out how technological advancements are helping non-profit organizations to expand their fundraising techniques from the traditional campaign plans like the direct mailing campaign to online fundraising and mobile donation applications. All these innovations do benefit the donors by providing them an easier method of donating but it also benefits the organization in the sense that donor behavior can now be monitored more effectively to give donors the right message at the right time to increase their chances of retaining them. McNutt (2020) highlighted that these tools also enhance transparency and accountability which are the crucial areas to get donors' trust.

Blockchain has also been used effectively as a means of enhancing organization transparency, especially in charitable organizations. Parkavi et al. (2023) posited that through blockchain, donors are enabled to track their donations while guaranteeing utilization of the funds. The transparency could help in building more credibly between the non-profit organizations and the donors, leading to increased donations. Cunha and Almeida (2021) built upon this concept to study how technology platforms work to handle donations, particularly with regard to leveraging open-source technologies to enable the processing of anonymous donations and tracking their status. These are important innovations that need to help improve the accountability of charities and this is a way through which charitable organizations can be able to develop mechanisms that can be put in place to ensure that donors can continue giving through online platforms.

Technological enhancements have also advanced the prospects of charitable organizations to engage with the social environments to create value jointly with social ventures' help: Álvarez-González et al. (2023) underlined that innovation orientation, omnichannel tactics, and ICTs positively impact the co-creation between nonprofits and social enterprises. These partnerships increased the value creation and the social welfare of the two organizations by proactively contributing to the Common Good and advancing public interest service delivery. Likewise, Kamal (2020) posited that the use of ICTs was effective in supporting cross-industry collaborations to expand opportunities for improving the lives of people by the nonprofits. These findings stressed

the need for cross- sector collaborations, precipitated by the technological advancements as the way forward towards attaining social utility.

Technology has become an essential element in how nonprofits can manage their resources, engage volunteers and execute their mandate. According to McNutt et al. (2018), ICT has brought significant change in the way nonprofits work; efficiency in information handling, effectiveness in decision making, and effectiveness in service delivery. ICT is applied by nonprofits to monitor results, communicate with the donors, and facilitate volunteers, thus increasing organizations' efficacy. Specific advantages of shared computing services were discussed by Crump and Peter (2014) with emphasis on the importance of those opportunities for small organizations including nonprofits. Cloud computing and shared services present a means through which the expenses of the nonprofits are cut, and on the other hand, they can promote cooperation and efficiency. These shared services give organizations a chance to use advanced technologies in their operations without having to invest large amounts of money at once, which at the same time makes them an optimum choice for companies and organizations with rather limited resources. Altogether, these studies indicate how technological advancement plays an important role in the increased effectiveness, efficiency and accountability of nonprofit organizations.

1.5 Business Process Reengineering in the non-profit sector

In a volatile global world, competitive advantage is advanced through Business Process Reengineering (BPR) by restructuring whole processes. BPR thus quickly grew to attain massive but unexpected popularity bolstered by Hammer (1990) and Davenport (1993) articles. It was found that the average success rate achievement of implementing BPR in the developed countries, Multi Nation Corporation was 55% where success rate of BPR was 61% in USA and 49% in Europe as revealed by Al-Mashari, et al. (2001). Most of the literature on BPR has concentrated on the significance of the diverse factors on implementation especially within the manufacturing discipline and significantly, little research has been carried out on the sector of charitable organizations (Ringim, 2012).

However, business process reengineering or BPR is a continuous process that has gained increasing significance in the context of the non-profit sector since it brings in the possibility of gaining considerable operational change. As charitable organizations strive to meet growing demands with limited resources, BPR can help by redesigning processes to eliminate inefficiencies and enhance service delivery. For instance, studies showed that charitable organizations

complained of inefficiency due to rigid workflows and complex structures that hinder efficiency in serving stakeholders. By applying BPR methodologies, the performance of charitable organisations can be enhanced through the elimination of non-value-added activities, thus enhancing the speed and efficiency of decision making and resource utilisation (Zarei et al., 2017). Moreover, this results in better satisfaction of the stakeholders, which is paramount to maintain support from the donors as well as volunteers (Zarei et al., 2017).

A key factor in the success of BPR in non-profits is the use of structured methodologies to guide the redesign process. Haddad et al. (2016) highlighted the fact that it is possible to apply the Business Process Management (BPM) method in non-profit organizations, stressing on the need to identify, analyze, redesign, and monitor the processes in question. The implementation of this methodology has been done on different non-profit organizations; in which has been provided better organizational and operational performance as well as improved services. For instance, Colombian process-based organisation, CAJASAN was able to enhance the interpersonal communication amongst departments of the organisation and the service delivery processes through the BPM method to be able to increase number of beneficiaries served with constant resource input. Vizzon et al. (2020) have suggested a comprehensive synthesis model for BPR that encompasses organizational, business process, and implementation levels. This model is especially valuable for non-profit organizations as it assists them in defining new objectives of the process redesign and matching them with the organizational mission and objectives and, thus, it helps to avoid introduction of changes to the organization's business which cannot be supported in the long term.

Effective change management is critical to the success of BPR in non-profits. Change management can be defined as the process of ensuring that all the concerned stakeholders of a change agree and that the change process is as smooth as possible. Haddad et al. (2016) noted that stakeholders should be engaged in the redesign process as early as possible to gain their commitment, and eliminate resistance to change. This is especially the case in non-profit organizations where the workers and volunteers are likely to be fully committed with the core values of the non-profit organization and may not appreciate changes that may be deemed to be detrimental to the same. According to Zarei et al. (2017), communication and training were the major factors of change management concerning the BPR projects. Thus, non-profits have to provide detailed information about the objectives for the process changes and the advantages of

the new methods, as well as organizing training to the employees and volunteers, so they would actively use the new modes and methods.

Technology plays a critical role in enabling Business Process Reengineering (BPR) in the non-profit sector. The additional use of digital tools including cloud-based environments, customer relationship management and process automation increases the performance and productivity of reengineered processes. In another case, Messina (2020) suggested that with the help of digital tools for process improvement, charitable organizations could effectively address existing inefficiencies and enhance process elements related to administration, data, and stakeholders. This is in line with Sharma et al. (2024) who stated that due to the use of technology in charitable organizations, administrative tasks such as volunteer roster and donor relations could be effectively managed through technology thereby freeing the staff to engage in activities that added value to the organisation. This integration adds efficiency to operations as well as enhances the effectiveness of the organization by optimizing the utilization of scarce resources.

Another valuable tool of the charitable organizations participating in BPR is process mapping. Because of the visualization of organizational running processes, organizations and companies would be able to note problem areas that require correction, optimization or elimination. Plank and Lindquist (2014) stressed that, process mapping gives clear and easily understandable ways to the teams of the charitable organizations in reviewing their operations and defining the best ways of their reengineering. Likewise, Al-Fedaghi and Mohamad (2019) pointed out that process mapping enables the identification of the complexity of work processes and therefore serves a purpose in the simplification of tasks to improve charitable organisation operational outcomes such as intake and scrubbing of donations. In this way, it creates less time to spend on acknowledging the contributions made by the employees, which in turn helps the organizations to increase the internal efficiency and also helps in improving the satisfaction level of the employees and thereby increasing the donor retention and satisfaction.

Performance metrics are essential for assessing the impact of BPR initiatives in the non-profit sector. Mission based measurements are the only acceptable grounds for measuring successes for charities which are different from for-profit organisations where financial measurements such as profit and revenues are allowed. According to Berenguer (2016), such indicators could refer to dimensions of service delivery, the satisfaction levels for the beneficiary, or the impacts realized in the community. The same sentiment is shared with Sedatole et al. (2013)

who suggested that performance metrics also assisted in fostering support from the staff and volunteers in supporting BPR initiatives. By setting out and defining correct measures, charitably oriented organizations can better define how their redesigned processes work, as well as their efficacy for the overall organizational mission and contribute towards establishing acceptable standards of performance.

In addition to performance metrics, stakeholder engagement is a crucial element of successful BPR in the non-profit sector. Hojati et al. (2015) have suggested that by involving key stakeholders which include the donors, beneficiaries, and volunteers in the redesign process, it becomes easy to ensure that the new process being implemented has been tailored with the requirements and expectations of the key stakeholders. This was supported by Byrne (2019) who pointed out that engaging stakeholders ensured that people were committed as well as having ownership to the changes being made thus eliminating any form of resistance to the changes being made. Through engaging key stakeholders in designing and implementing new processes, charitable organizations have an opportunity to develop new working environments and establish more efficient and sustainable operations, which in turn benefits the communities and cements long-lasting stakeholder relations.

Capacity building is critical for ensuring the long-term success of BPR initiatives in non-profits. According to ShahulHameedu and Kanchana (2014), capacity building can be referred to as the process of enhancing the human and management resources, capacities, and skills required in order to support the initiation and continued execution of new processes. Mentioned by Nordin et al. (2024), staff training, updating of technology and enhancing governance are some of the subcategories of organizational capacity enhancement. When charitable organisations build up this ability to manage and embrace change it confirms to them that only good changes take place during BPR and make the charitable organisations sharper to embrace constant change needed in volatile environment to meet the stakeholder requirements.

Despite its potential benefits, BPR in non-profits is often met with resistance to change. Non-profits typically have entrenched practices and cultures that can make it difficult to implement radical process changes. Vizzon et al. (2020) noted that addressing cultural resistance is crucial for the successful implementation of BPR in non-profits. The authors argue that involving stakeholders in the redesign process and fostering a culture of innovation can help overcome these barriers. Additionally, resource constraints, which are common in the non-profit sector, can hinder

the implementation of BPR. Zarei et al. (2017) highlighted that limited financial and human resources can make it challenging for non-profits to carry out large-scale process reengineering projects. However, with innovative solutions and external support, such as partnerships with technology providers or consultants, non-profits can still achieve significant process improvements.

1.6 Fundraising and donor management in the age of digital transformation

There has been a revolution in fundraising and donor management due to the innovations in digital technologies that make work easier, reaches more prospects, and increases accountability by the charitable organizations. Various advances in technology, crowdfunding and mobile payments thus bring changes in donor relations and ensure organizational credibility and structural improvement in financial practices among charitable organizations.

Traditionally, fundraising and management of the donors have come under a lot of transformation through the modern technologies. Charitable organizations are also benefiting from the use of digital markets to extend their coverage and enhance the effectiveness of fundraising. Afandi et al. (2024) pointed out that Lazismu Medan City, a philanthropic institution in Indonesia, experienced a significant increased donation and donor satisfactions when the institution started to use digital fundraising platform. This revealed how technology had influenced the efficiency and effectiveness of the operations, as well as the level of visibility of the fundraising activities. Zhou and Ye (2021) extend from the discussion by further pointing out that while the emergence of online networks boosts the digital form of donations, it has the possibility of improving the offline form of donations through changes in organisational legitimacy and trust. Altogether, these findings pointed at the centrality of the web-based technologies in enhancing the work of donors and the success of fundraising efforts.

Technology also plays its part, especially with progression of the internet, where crowdfunding is an evident form of raising funds for non-profit organizations through collection of numerous small donations. Rahman (2024) stressed that crowdfunding provides an easy way of soliciting funds and makes it possible for the non-profits to raise the required funds much faster and effectively as compared to the conventional ways. This was followed by the use of blockchain technology to increase the levels of transparency and credibility of these crowdfunding platforms for secure and traceable transactions. Similar to Abdallah and Younis (2023), the surveyed participants argued that the use of ICT, particularly tools such as crowdfunding opens up

opportunities of financing for non-profits since it helps cut the incurred transaction costs and also diversify a non-profit organisation's donor portfolio. Thus, fintech and crowdfunding should be used to invent new fundraising opportunities, as well as to restore the donors' confidence by providing them with transparent information.

It has also been exemplified that the adoption of Information technology (IT) has a positive impact on the development of fundraising capacity in non-profit organizations. According to Mao (2022), the use of funds to invest in IT has a positive effect on total revenue, amount received from charitable donations, and program service income. IT adoption not only helped management in the efficiency way but also the donor relationship management as the organizations can now engage with the donors in a more strategic way. Similarly, Husni et al. (2021) explain that web-based donation platforms ease the processes toward donation as a way of reducing physical contact. These technological interventions enabled charitable organizations to conduct their fundraising in a more streamlined and accountable manner, especially in the unprecedented circumstances like the Covid-19 outbreak.

Mobile payments have also influenced the donor management and fundraising within the donation systems. According to Kim and Kim (2021), there it was revealed that the factors of ease of use and perceived usefulness of m-payment systems helped to increase donor's trust and satisfaction, thus the repeat donations. Mobile and online payments continue to dominate people's preference, which has enhanced communication between the donors and charitable organizations through convenience and quick transaction confirmation. This is supported by Hommerová and Severová (2019) who explain that new technologies of fundraising make it easier for charitable organizations to adapt to the donors' needs and expectations. Therefore, mobile technology is crucial in the donation process to ensure that the process is easier to accomplish, thus leading to greater donor participation and continuation.

Thus, the modern model of fundraising has been continually popularized across the internet, especially for the functional areas like arts related charitable organizations. In their published study Turrini et al. (2020) ascertained that online giving has increased exponentially in arts over the last decade through the application of crowdfunding tools as well as new generation digital platforms to attract new and young donors. However, arts organizations have not been able to harness these technologies optimally as the other non-profit organizations have done. Nageswarakurukkal et al. (2020) found similar trends in Switzerland where despite small and

medium sized non-profits recognizing the cost benefits and outreach that online fundraising tools bring, there is limited use. The findings point to the fact that, although online fundraising is becoming increasingly popular, there are yet obstacles to the effective incorporation of the approaches into non-profit fundraising frameworks.

The management of donor relations has also been revolutionized by the use of the new found digital platforms. As observed by De Silva et al. (2023), the advancement of web-based charity management systems through registers, display services, management of charitable donations was also recounted. These platforms do not only simplify the donation process but also improve the levels of trust and openness between the donors and the organizations. In the same rationale, Csongrádi et al. (2018) pointed to the fact that charitable organizations are exploiting the available technologies such as new payment patterns and digital currencies with an intention of reducing the barriers to the act of giving among philanthropic individuals. These emphasized the increased roles of technology in establishing trust and improving the management of donors, in order to enhance its effectiveness in fundraising.

1.7 Collaboration and Partnerships

Collaboration and partnerships between charitable organizations and technology companies have proven essential in driving digital transformation in the nonprofit sector. Some among the challenges that affect charities include lack of finance, outdated equipment as well as poor technical know-how, therefore reliance on technological integration and support from technological companies is importance for charity organizations due to the following reasons; innovation and modernization. Partnership between the charitable organizations and technology firms provided charities with new technology that improved productivity and outreach, as stated by Hwang, (2017). Hoglund (2024) identified that partnerships with tech companies offered charity organisations means of streamlining their operations and enhance data handling; thus, minimising administrative burden and enhancing charitable resource utilisation for higher value-added tasks. While these partnerships have enhanced internal efficiency of the charities, they have also assisted charities in expanding their operations and reach through better digitization.

The collaborations between charities and the tech firms also help increase innovation in fundraising and the volunteers or donors. Austin and Seitanidi (2012) established that through technology companies, modern charities were exposed to enhanced fundraising tools and integration of social networks with causes. This partnership enabled charities to offer goodwill

givers the kind of experience that they prefer, hence enhancing goodwill givers' loyalty and satisfaction. Similarly, Ihm and Kim (2021) emphasised how technological advance solutions helped NGOs to achieve new forms of fundraising, including crowdfunding and digital marketing campaigns that greatly enhance their awareness and outreach among international donors. These partnerships have not only taken charity fundraising into the twenty-first century but also helped charities access a new generation of potential supporters who are more likely to be interacting with brands on social media.

Collaborative efforts between charities and tech companies also played a pivotal role in improving service delivery. A study conducted by Sharmin et al. (2017) showed that the technology companies offered the platforms and applications that helped charities to organise the services, as well as to make them more readily available to the beneficiaries. For instance, collaborations with cloud solutions enabled collaborating charitable organizations to organize data better, so they could respond to the needs of the community faster. Also, collaboration with technology companies made it easier for charitable organizations to create mobile apps for digital service delivery especially during the COVID-19 pandemic. Wraikat et al. (2017) suggested that these applications enabled the charitable organizations to continue operating effectively during the imposed social distancing hence providing vulnerable individuals with necessary support.

In addition to increasing working effectiveness and service quality, collaboration with IT companies has been highly effective in assisting charities in strengthening their data analysis capacities. According to Goldberg (2020), technology companies came up with data measures to improve the operation of charitable organizations as they introduce the culture of metrics to measure their programs' success. Such partnerships allowed charities to harness the power of the big data and machine learning systems to identify the patterns and trends in the usage of services provided by charities, the behaviour of donors and the overall need of society. However, the mass reach and increased competition that came with the attention led to greater benefits for charitable organizations as they were able to make better decisions when and where they would have the most impact. Because of these data insights, charitable organizations could show donors how their information has been used, thereby enhancing donor trust and future financial contributions.

Collaborations with tech companies also contributed to fostering a culture of innovation within charitable organizations. Al-Tabbaa et al. (2014) have established that nonprofits which had collaborations with technology firms had higher probabilities of testing something new in

technology and ways of addressing challenges. These partnerships ensured that charity staff changed their ways of working by adopting new approaches that made the organisations more innovative and flexible. Furthermore, Goecks et al. (2008) also pointed out that these partnerships involved organisational training and development to address capacity concerns of charity organisations' employees and volunteers on technology literacy. While it was effective for the charity to get the expert input and then implement it, it also helped its staff to keep building on the progress after the knowledge transfer had already taken place, thus helping to make it more sustainable in the longer term.

The role of partnerships in facilitating digital transformation extends beyond technology access. As cited by Austin (2010), the participating technology companies offered funds, guidance, and sponsorship to the non-profit management, with the aim to assist them in managing change. These collaborations helped charities transform the ways they operate by making them more sustainable with diversified income and helped them pivot their selling to digital platforms. Similar research by Kerrison (2023) showed that partnerships with tech companies benefited the charities with extended access to the circle of corporate and individual sponsors motivated by modern technological solutions. Therefore, partnerships with tech companies were not only about the introduction of digital tools in charities' activity but also about new sources of funding for their further development.

1.8 Organizational size and Digital Transformation

Organizational size significantly influences the effectiveness of digital transformation efforts, with notable variations in adoption and implementation strategies across firms. According to Martínez-Morán et al. (2024), large organizations are more likely to have access to advanced digital technologies and their application in fields like digitalization. The study revealed that there is a positive relationship between company size and capabilities in using digital platforms to deploy, develop, and communicate skills, thereby providing competitive advantage. Ferraz and co-authors (2020) also shared this perspective stating that large companies are in fact more ready and capable to progress the advanced modes of technology utilization. Small and medium enterprises, although evolving, are constrained by resource issues and may need policy actions to overcome these constraints. From these studies, it can be concluded that being large, gives inherent benefits, but more frequently circumstances including managerial processes, education, and policies define outcomes of digital transformation.

While organizational size significantly influences digital transformation, some studies suggest that its impact is context-dependent, with varying arguments about whether size truly matters. Santos (2023) highlighted that smaller firms, despite resource constraints, have significantly reduced the digital divide with larger organizations through innovative strategies and the focused use of limited resources. This finding indicated that size alone does not dictate success; instead, factors such as digital competencies and strategic priorities play a crucial role. Similarly, Clemente-Almendros et al. (2024) pointed out that within SMEs, size heterogeneity matters, but it is not the sole determinant of digital transformation success. The role of managerial education and internationalization emerged as critical, suggesting that small firms can achieve parity with larger firms when equipped with the right knowledge and networks. These insights challenge the notion that size is a universal predictor of effectiveness in digital transformation.

1.9 Training and Digital Transformation

Training is one of the basics for any digital transformation due to the need to prepare and empower employees for change. According to Al-Baher (2024), digital transformation entails the incorporation of new digital technologies and applications as well as continuous learning to adapt to new changes. The findings showed that training activities did not only improve the technical performance of the human capital but also facilitated new talent acquisition and empowered worker learning and growth, thus fostering organizational dynamism and viability. In the same vein, Nicolás-Agustín et al. (2024) underscored that ICT training was a direct determinant of company performance on account of its effects on human capital and organizational commitment. It was revealed that when employees go through a proper ICT training program, they will be receptive to new behaviors, which are crucial for the digital transformation of the organization creating positive feedback of training on the organization.

Corporative training initiatives are strategic in the digital transformation because they help build a continuously learnable and improvable workforce. Morozov (2023) noted that corporate education must be aligned with digital transformation initiatives to ensure that employees are equipped to manage disruptions that emerge due to continued innovation in technology. The implications underscored the notion that the creation and sustenance of a learning culture facilitated the grasping and application of improvements by the workforce, in a way that supported the accomplishment of the goals intended for transformation efforts. Similarly, the study by Trenerry et al. (2021) pointed out that skills training, having workplace resilience, and being

adaptable are important aspects of the digital change at the individual level. Altogether, all these results highlighted the need for more fostering orientation training meta frameworks that will incorporate passive training in terms of courses and educational techniques that would assist in gradually developing trainees into change-ready employees as well as guarantee sustainable organizational preparedness for change.

Employee training not only focuses on the present-day performance deficiencies but also creates long-term orientation and fortification for more extended digital transformation goals. Yu et al. (2023) showed that training provision increases the extent of environmental sustainability benefits arising from digital transformation by endowing employees with knowledge on how to use digital application for environmentally friendly activities. Training guarantees that employees and other organizational stakeholders are able to make a positive impact toward achieving sustainability, and thus connecting digital transformation with other organizational objectives. Similarly, Haque et al. (2024) have also pointed out that it would be important to invest in developing the higher order skills of employees by providing them with higher learning in the future to equip the workforce with tolerance to changes that are brought about by the digital revolution. The conclusions made are the increasing importance for structured training programs to foster short-term, as well as, long-term enhancements in digital transformation efforts.

Training in digital competencies is an essential tool, which helps to bring the necessary changes in employees' profiles when talking about transformation in the context of digitalization. Taruchain-Pozo & Avilés-Castillo (2023) highlighted that virtual and technology-oriented training facilitate a better outcome of the workers' attitudes and performance to keep up the organization going on in technologically advanced business environments. However, with these advantages some of the challenges are; resistance to change and limits of technology. Talafidaryani (2023) supported these findings further by establishing that firms' dynamic capabilities like sensing, adaptive and transform capabilities only acted as the moderator between digital transformation and organizational performance. These studies stressed that, due to the constantly changing nature of the digital environment, comprehensive training is crucial for the employees.

1.10 Theoretical Framework - Business Process Reengineering (BPR)

Business Process Reengineering (BPR) is a radical approach to rethinking and redesigning business processes to achieve significant improvements in performance metrics such as cost, quality, service, and speed. Business Process Reengineering (BPR) is the drastic activities of

redesigning current business processes in order to reduce cost, improve quality, or enhance service and speed. BPR was initially defined by Hammer and Champy (2009) as a means of attaining drastic improvements in exceptional situations through the elimination of non-value-added activities. On this basis, Davenport (1993) defines BPR as an innovation process and observes that reengineering can become a trigger for the reengineering of an industry. Gathari et al. (2014) continued and asserted that BPR is not only targeted towards the improvement of costs and performance but also leads to the integration of organizational cultures, more especially in the merger scenario.

BPR therefore works by restructuring business processes in such a way that productivity, efficiency and levels of customer satisfaction are enhanced. Organizational learning is not just about achieving small marginal gains but it is a matter of reinventing the way work is performed. Some of the key benefits associated with organizations that practice BPR include, reduced costs, enhanced services delivery and improved cycle times (Gathari et al., 2014). This type of approach is also considerably different from Lean or Six Sigma approaches that would be process improvement methodologies based on incremental improvements. On the contrary, BPR requires the radical redesign of the firm's core processes (Zuhaira & Ahmad, 2021; Al-Shammari, 2023). This broad view suggests that BPR has grown to a strategic tool for companies who wish to rethink their structure and stream their business operations.

BPR's focus on radical change rather than incremental improvements establishes it as a high-impact framework that can realign organizational objectives with optimized processes. According to Banham (2010), it is crucial for organizations to constantly evolve to fit the developments in the technological field as well as the consumers' expectations. Therefore, BPR is being adopted as a strategic approach in digital transformation initiatives (Ahmad & Van Looy, 2020). Given current trends that make digital technologies more necessary for organizations, BPR is a methodical approach to building solutions into core business processes. Whereas other methodologies include new technologies in existing business processes that create parallel systems, BPR helps to integrate technology into redesigned work, making all the changes more efficient and data-driven. This integration especially applies to the client facing elements, for example, faster catalyst response, real-time assistance, or enhanced customer offerings. Integrating higher technologies like ERP systems, CRM platforms, data analytic tools, and automation into

reengineered processes helps in responding to customers' needs and dynamic market environment effectively (Siregar, 2021).

Thus, standing on the principles of radical change, BPR goes further from gradual improvement to the total redesign of the business processes. BPR aims at redesigning the business process from end to end with its focus being on the effectiveness of the processes as observed through the lens of the organisation's customer. As opposed to a simple optimization of individual processes, BPR aims to redesign whole business processes for better flexibility and accordance to strategic objectives (Siregar, 2021). This also entails the use of cross-functional teams rather than most organizations' vertical structure that does not allow simple end-to-end process integration and builds organizations that are more responsive to market changes.

The constituents of the business process reengineering are; Customer Orientation – it focuses on placing the customer at the centre of process changes in a bid to improve satisfaction and deliver value through better service. Restructuring of the firm involves the transformation of hierarchy structures to process structures with enhanced integration of cross-functional teams for efficiency (Milani & Garcia-Banuelos, 2018). Organizational cultural adaptation is required to ensure people in organizations, and this can be achieved through employees' change commitment resultant of effective change management as well as adequate communication. Through risk management, organizations avoid possible disruptions from radical changes through methods such as pilot tests and gradual changes. According to Vanwersch et al. (2016), BPR unites all departments into a single composite whole with the intent of creating a full-blown process that has been optimized with the purpose of achieving a certain business objective. Therefore, successful implementation of BPR leads to increased business performance by organizations.

1.11   Conclusion

The implementation of digital transformation and Business Process Reengineering (BPR) in the charitable organizations indicates the possibility of enhancing the operational efficiency through the point of utilizing the latest technological tools and techniques (Cipriano & Za, 2023; Gooyabadi et al., 2023). While compared to for-profit organizations, the adoption of digital technologies has been slower in charitable organizations, using automation, cloud, and data analytics increases effectiveness and utilization of limited resources (Freitag & Hämmerle, 2022; Hasnan et al., 2017). When combined with BPR, the digital transformation helps charitable organizations redesign processes, enhance engagement with stakeholders and allocate resources,

thus enhancing donors' confidence and social value (Al Najjar et al., 2022; Afnan et al., 2022). Nonetheless, constraints including inadequate funding, lack of technological skills, and organizational resistance present difficulties to widespread implementation (Nikita et al., 2024; O'Grady & Roberts, 2019). However, there is much organizations can gain in terms of transparency, service delivery, and stakeholder satisfaction when organizations are able to use digital tools efficiently (Hashem, 2020; Lee et al., 2011). Future studieare indeed required to better understand how and to what extent BPR strategies that fit the context and goals of the nonprofit organisation have to be encouraged or may be enforced (Filuk & Lisova, 2023). Ideally, as the types of digital tools differently develop, the correct usage of them in the charitable organizations will be very important not only in terms of the creation of the maximal positive social outcomes, but also in the terms of organizational sustainability (Jong & Ganzaroli, 2024).

2 METHODOLOGY OF THE RESEARCH ON DIGITAL TRANSFORMATION FOR IMPACT IN CHARITY ORGANIZATIONS

2.1 Aim of study

The aim of this study was to examine the relationship between BPR and the efficacy of harnessing digital transformation in bringing about better outcomes from various business processes involved in charitable organizations.

2.2 Study Hypotheses

H1: The level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation.

The embedding of business process reengineering (BPR) within organizations led to the achievement of enhanced digital transformation results. As Hammer and Champy (2009) also pointed out, BPR targeted the extensive restructuring of key business processes in order to improve organizational productivity. Ahmad and Van Looy (2020) emphasized that BPR acts as a crucial enabler of digital transformation by embedding advanced technologies such as ERP systems and automation directly into reengineered processes, ensuring higher efficiency and adaptability (Ahmad & Van Looy, 2020). This alignment not only improved the impact of digital initiatives but also promoted customer-oriented strategies, as it was seen in charitable organizations using these technology tools for improving stakeholder relations.

H2: The extent to which the service delivery at a charity organization is based on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation.

For successful digital transformation, Business Process Engineering (BPE) forms a key aspect of focus. Fakhruddin and Novani (2023) posited that BPE frameworks are crucial for improving efficiency and ensuring that processes are not lagging behind modern technologies. Jong and Ganzaroli (2024) pointed out that BPE helps non-profit organizations to use tools like analytics to communicate with stakeholders more effectively. As a result of the logical and well-defined dependence on BPE, processes remain flexible and can be easily scaled (Gooyabadi et al., 2023). However, Haddad et al. (2016) identified that a low level of dependency on Business

Process Engineering can result into scattered implementation strategies that hampers the change agenda by digital technologies.

H3: The extent to which the service delivery at a charity organization is based on Business Process Engineering mediates the relationship between the level of Business Process Reengineering and the effectiveness of Digital Transformation.

Organizations that leverage on the benefits of Business Process Engineering (BPE) often demonstrate a stronger connection between reengineering efforts and successful digital transformation throughout their operations. Gooyabadi et al. (2023) observed that BPE-dependence ensures a structured approach to process redesign, enabling seamless integration of digital tools. Filuk and Lisova (2023) highlighted that organizations heavily invested in BPE experience smoother transitions, as foundational reengineering aligns with technological advancements. Hammer and Champy (2009) further emphasized that such dependence fosters consistency in process improvements, optimizing outcomes in digital transformation initiatives. This underscores the importance of embedding BPE practices to bridge BPR strategies and technological advancements seamlessly.

H4: Training has a positive impact on the effectiveness of Digital Transformation.

Training comes out as a key success factor for digital transformation projects to be effective. As highlighted by Zarei et al. (2017), training is a crucial aspect as it ensured that the employees are prepared to fit in the reengineered processes and digital tools. Nordin et al. (2024) pointed out that the training promotes the culture of innovation whereby the staff can utilize the new technologies. Also, according to Zarei et al. (2017), training helps in minimizing resistance to change because it enhances the match between employees' capacities and transformational needs of the organization. Altogether, these findings indicated that high-quality training improves the effectiveness of digital transformation by cultivating skills and favorable attitudes among receivers.

H5: Training moderates the relationship between the level of Business Process Reengineering and the effectiveness of Digital Transformation.

Training equips employees with the skills needed to adapt to reengineered processes, enhancing the adoption of digital technologies. Haddad et al. (2016) highlighted that training initiatives build a workforce adept at handling the complexities of redesigned workflows, which in turn amplifies the benefits of BPR. Banham (2010) emphasized that targeted training aligns employee capabilities with organizational transformation goals, bridging gaps between process changes and technological demands. Similarly, Gathari et al. (2014) demonstrated that structured training fosters a culture of acceptance and innovation, mitigating resistance to change. As such, training intensifies the synergy between BPR and digital transformation, driving more effective outcomes.

H6: The effectiveness of the Digital Transformation depends on the size of the charity organization.

Organizational size has been shown to be associated with the success of digital transformation in charitable contexts. Cipriano and Za (2023) observed that the larger charities spend more in both digital tools and structures in their organizations due to their scale economies. On the other hand, small organizations are likely to suffer from a lack of resources, which prevents them from implementing robust strategies across the organization (Jong & Ganzaroli, 2024). Kulkova and Kulkova 2021 noted that small charities may lack the financial capital to drive innovation, but could be more agile than their larger counterparts and be better positioned to take advantage of new technologies. Therefore, the size of a charitable organization shapes the strategies and outcomes of digital transformation, requiring tailored approaches to maximize effectiveness.

2.3 Research Model

Extent to which service delivery at the organization is based on Business Process Engineering

Level of Business Process

Effectiveness of Digital
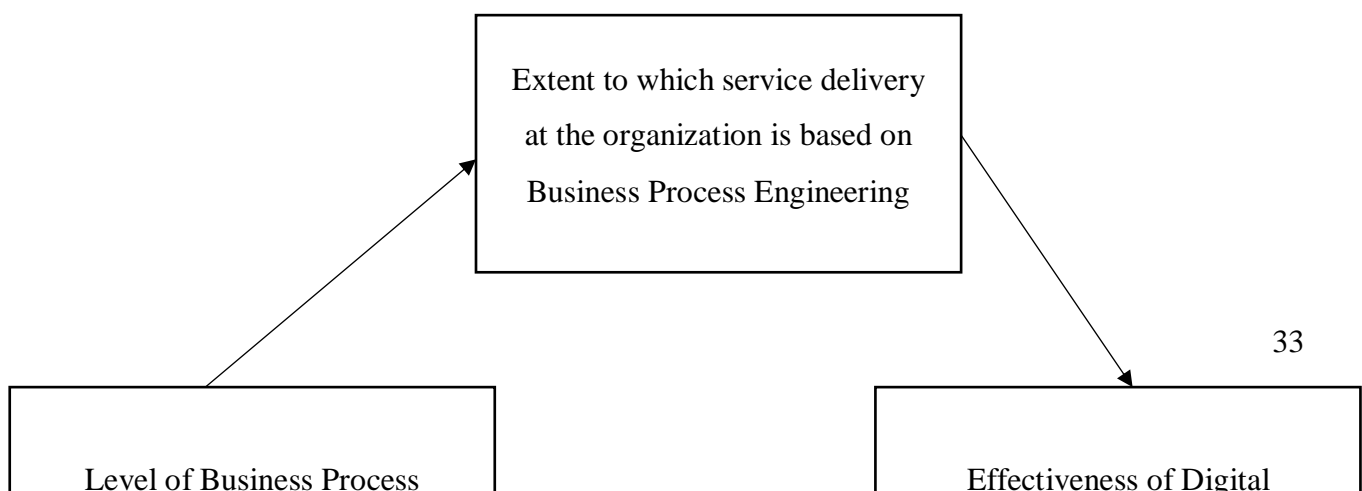
Figure 1: *Research model*

2.4 Sampling and sample size

The required sample size of this study was determined by the use of the G*Power software. The G*Power analysis revealed a minimum required sample size of 129 respondents. The criteria for participating in this study was for one to be working in at least one charity organization during the time this study was being conducted.
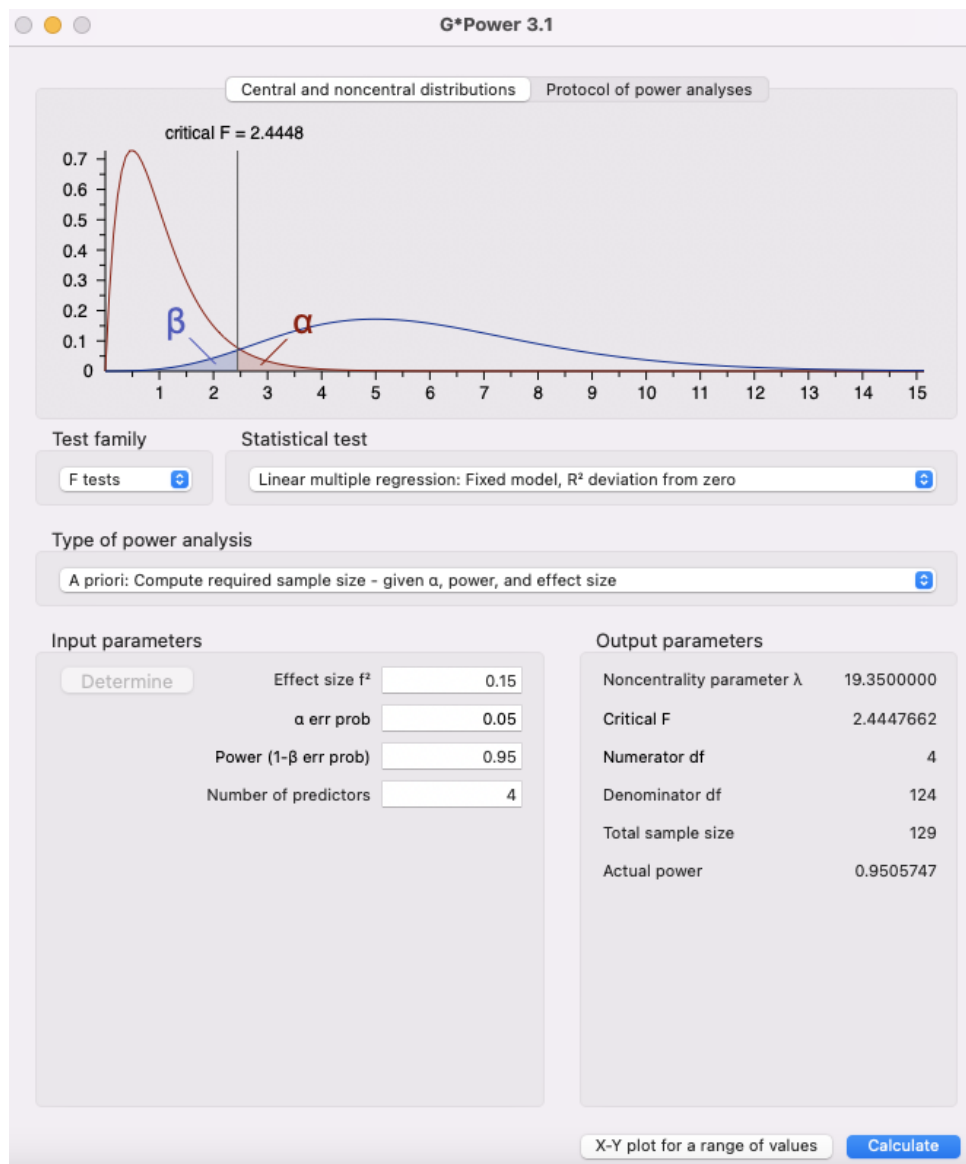
2.5 Data collection

Data used in this study was collected from people who worked in charity organizations during the time this study was being conducted through sharing of a survey link (for the questionnaire) to social media channels - especially WhatsApp groups of workers of charity organizations. Whenever an employee of a charity organization was found, they would be requested to share the link to the WhatsApp groups in which their colleagues were members of.

Thereafter, those willing to participate in the study would click on the link to the survey and respond to the questionnaire.

The questionnaire used to collect data for this study was designed from several sources of literature, based on the variables of this study. The following table illustrates the various variables of the study and their respective items/levels and the sources from which they were adopted.

Table 1

Survey items and sources

Variable	Survey questions	Source
Level of Business Processes Reengineering	1. When our organization processes reengineered, the level of the reengineering process was successful. 2. When our organization processes reengineered, organizational leadership focused on its processes during the reengineering effort. 3. When our organization processes reengineered, organizational leadership spent a lot much time on current processes during the reengineering effort. 4. When our organization processes reengineered, organizational leadership had strong executive leadership commitment during the reengineering effort. 5. When our organization processes reengineered, organizational leadership was not timid during the reengineering effort. 6. When our organization processes reengineered, organizational leadership went from a conceptual design phase right into an implementation during the reengineering effort 7. When our organization processes reengineered, organizational leadership took too long to complete its reengineering	Nissar (2022)
Extent to which service delivery at the organization is based on Business Process Engineering	1. Service delivery at the organization depends on re-engineered systems in place 2. Staff at the organization have integrated with the system in place 3. Service delivery at the organization depends on the re-engineered process in place 4. Staff at organization understand the reengineered process adopted. 5. Service delivery at organizations depends on the technology used	Otwoma et al. (2021)

	6. Technology adopted at organization has improved service delivery 7. Donors are willing to invest in the organization's digital concept in provision of service delivery	
Training	1. Employees in each job will normally go through training programs every year. 2. Training needs are identified through a formal performance appraisal mechanism. 3. There are formal training programs to teach new employees the skills they need to perform their jobs. 4. Training needs identified are realistic, useful and based on the business strategy of the organization 5. A trainee has been given an opportunity to perform learned skills 6. The training I received helped me to enhance high quality of product/service effectively	Ismael et al. (2021)
Effectiveness of Digital Transformation	1. Digital transformation improves our clients' experiences. 2. Digital transformation improves the whole organisation's productivity. 3. Digital transformation improves the productivity of people in my team/department. 4. The new system improves our organisation's services. 5. Digital transformation improve our productivity. 6. Digital transformation improve the organisation's return on investment 7. The new digital system is more secure. 8. All resources are easier to access in the new system.	Wang et al. (2023)
Organizational size	• 1 - 10 (Micro-company) • 11 - 50 (Small company) • 51 - 500 (Medium company) • More than 500 (Large company)	Yang et al. (2022)

2.6 Data analysis

Data analysis for this study was conducted using the Statistical Package for Social Sciences (SPSS) software - version 28. Before analyzing the dataset, the reliability of the constructed variables was evaluated using the Cronbach's alpha coefficient function in the SPSS software. Demographic characteristics were observed and descriptive statistics (of means and standard deviations) were thereafter generated for both the survey items and the respective study constructs.

Normality was assessed using the Kolmogorov-Smirnov and Shapiro-wilk test statistics, as well as skewness and kurtosis statistics. The study hypotheses were assessed using inferential statistics of bivariate (H1, H2, and H4), multiple linear regression (H3 and H5) and one-way analysis of variance (H6).

3 RESEARCH ANALYSIS OF THE RESEARCH ON DIGITAL TRANSFORMATION FOR IMPACT IN CHARITY ORGANIZATIONS

3.1 Demographics

Demographic attributes were also collected during the data collection phase of the study to help understand the attributes of the study's participants. There were a total of 195 participants in this study.

Table 2

Demographic characteristics

Characteristics	Frequency	Percentage
Gender		
Male	120	61.5%
Female	50	25.6%
Other	25	12.8%
Age Group		
18-25 years old	13	6.7
26-35 years old	37	19.0
36-45 years old	68	34.9
46-55 years old	63	32.3
56 years and older	14	7.2

Most of the participants of this study were female respondents (61.5%, $n = 120$), 25.6% ($n = 50$) of the participants were male while another 12.8% ($n = 25$) of the participants identified with other gender identities.

Figure 2: Gender

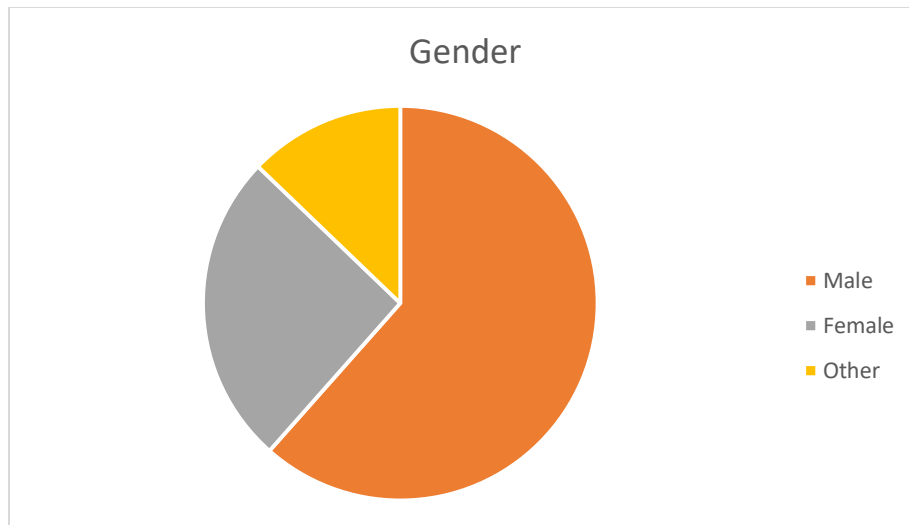There was a fairly even distribution of age categories among the study participants with 34.9% ($n = 68$) being aged between 36 and 45 years old, 32.3% ($n = 63$) being between 46 and 55 years old and 19% ($n = 37$) of the participants aging between 26 and 35 years old. Only 7.2% ($n = 14$) of the study's participants were aged 56 years and above and 6.7% ($n = 13$) aged between 18 and 25 years.
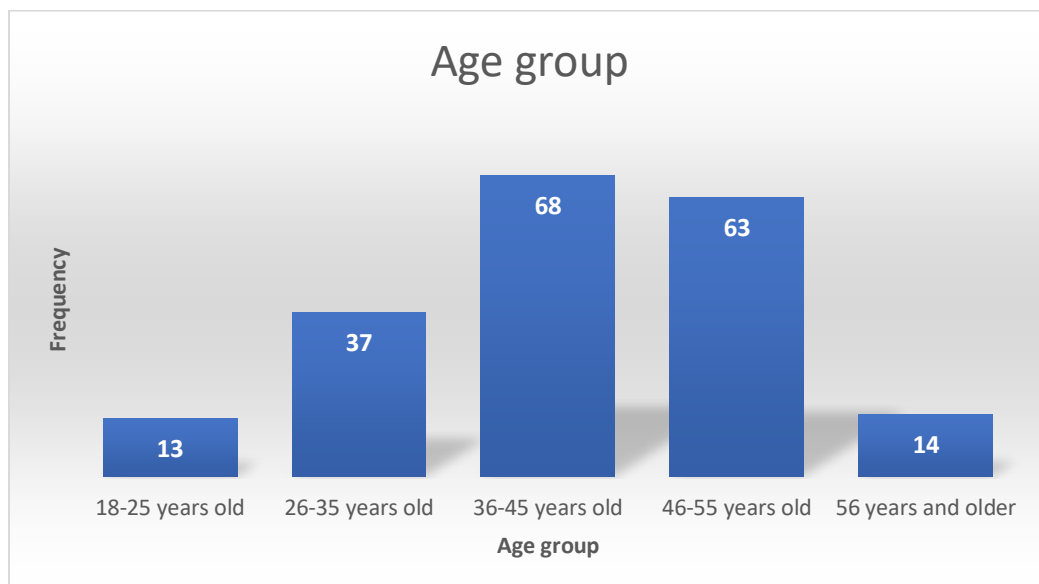
Figure 3: Age

3.2 Reliability analysis

The internal consistency of the variable constructs of the study was evaluated using the Cronbach's alpha coefficient. This was done because the variables were computed from various survey items. According to Tavakol and Dennick (2011), a Cronbach's alpha coefficient of 0.7 and above is deemed as a n acceptable level of internal consistency. All the constructs in the study returned a Cronbach's alpha coefficient that is greater 0.7 as illustrated in table 3 and thus had an acceptable level of reliability.

Table 3

Reliability Analysis

Variable	Number of items	Cronbach's alpha coefficient
Level of Business Process Reengineering	7	0.752
Extent to which service delivery at the organization is based on Business Process Engineering	7	0.781
Training	7	0.783
Effectiveness of Digital Transformation	8	0.785

3.3 Test for normality and descriptive statistics

3.3.1 Normality tests

The Shapiro-Wilk and Kolmogorov-Smirnov tests of normality were used to assess the distribution of the data used in this study. The p-values for both tests (Shapiro-Wilk; $p = .388$, Kolmogorov-Smirnov; $p = .241$) tests were greater than .005, thus implying that the data was normally distributed. This is illustrated in table 4.

Table 4

Tests of normality

Tests of Normality						
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Effectiveness of Digital Transformation	.097	195	.241	.975	195	.388

The skewness and kurtosis statistics for all the survey items ranged between -1 and +1; an implication that these were normally distributed - further confirming the normality of the study's dataset. Table 5 depicts the Mean, standard deviation, skewness, and kurtosis statistics for all the survey items used in the study.

Table 5

Descriptive statistics and normality

	Mean	SD	Skewness	Kurtosis
When our organization processes reengineered, the level of the reengineering process was successful.	3.15	1.087	-.286	-.610
When our organization processes reengineered, organizational leadership focused on its processes during the reengineering effort.	3.17	1.079	-.452	-.687
When our organization processes reengineered, organizational leadership spent a lot much time on current processes during the reengineering effort.	3.34	1.125	-.391	-.575
When our organization processes reengineered, organizational leadership had strong executive leadership commitment during the reengineering effort.	3.52	1.067	-.562	-.207
When our organization processes reengineered, organizational leadership was not timid during the reengineering effort.	3.55	1.167	-.551	-.626
When our organization processes reengineered, organizational leadership went from a conceptual design phase right into an implementation during the reengineering effort	3.50	1.114	-.459	-.598
When our organization processes reengineered, organizational leadership took too long to complete its reengineering	3.56	.963	-.414	-.115

Service delivery at the organization depends on re-engineered systems in place	3.37	1.030	-.459	-.283
Staff at the organization have integrated with the system in place	3.54	1.075	-.591	-.304
Service delivery at the organization depends on the re-engineered process in place	3.54	.980	-.372	-.381
Staff at organization understand the reengineered process adopted	3.80	.956	-.735	.290
Service delivery at organizations depends on the technology used	3.65	1.085	-.724	-.034
Technology adopted at organization has improved service delivery	3.65	1.037	-.817	.456
Donors are willing to invest in the organization's digital concept in provision of service delivery	3.43	1.049	-.518	-.199
Our organization conducts extensive training programs for its employees in all aspects of quality	3.39	1.002	-.640	-.102
Employees in each job will normally go through training programs every year	3.46	1.104	-.539	-.385
Training needs are identified through a formal performance appraisal mechanism	3.60	1.037	-.536	-.098
There are formal training programs to teach new employees the skills they need to perform their jobs	3.73	1.052	-.753	.125
Training needs identified are realistic, useful and based on the business strategy of the organization	3.51	1.057	-.537	-.260
A trainee has been given an opportunity to perform learned skills	3.64	.987	-.692	.260
The training I received helped me to enhance high quality of product/service effectively	3.46	1.141	-.578	-.364
Digital transformation improves our clients' experiences	3.41	1.023	-.571	-.186
Digital transformation improves the whole organization's productivity	3.59	1.033	-.526	-.202
Digital transformation improves the productivity of people in my team/department	3.52	1.105	-.533	-.434
The new system improves our organization's services	3.68	1.031	-.698	.150
Digital transformation improve our productivity	3.67	1.029	-.500	-.444
Digital transformation improve the organization's return on investment	3.72	1.059	-.599	-.366
The new digital system is more secure	3.72	.962	-.496	-.212
All resources are easier to access in the new system	3.66	.914	-.492	.373

3.3.2 Organizational size

Most of the participants of this study worked in medium (43.1%, $n = 84$) and small companies (40%, $n = 78$) in size. On the other hand, 9.2% ($n = 18$) and 7.7% ($n = 15$) of the participants worked in large and micro-companies respectively. Table 6 and figure 4 depict the distribution of participants by organizational size.

Table 6

Organizational size

	Frequency	Percent
Micro-company	15	7.7
Small company	78	40.0
Medium company	84	43.1
Large company	18	9.2
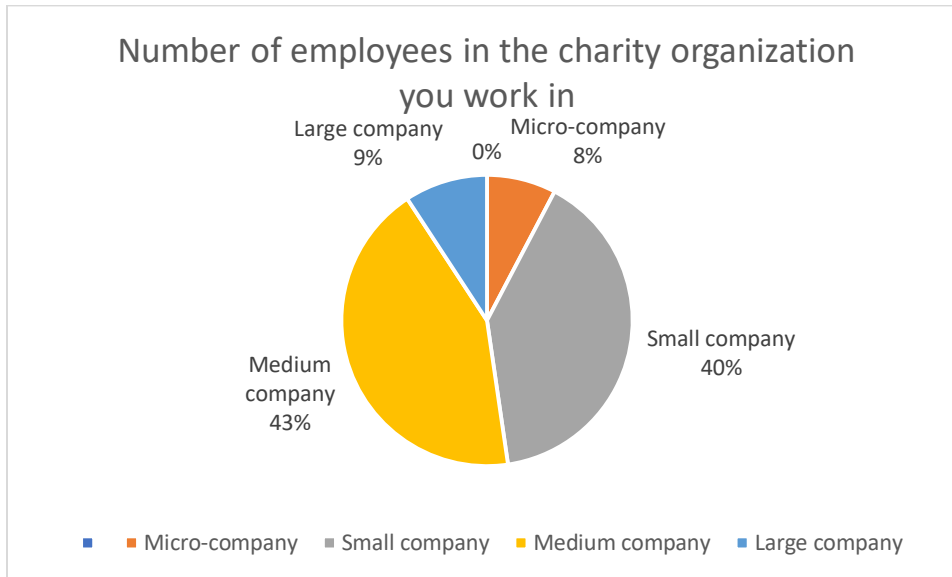
Figure 4: Organizational size

3.3.3 Descriptive statistics of variable constructs

Table 7 illustrates the mean and standard deviation statistics for the continuous variable constructs of this study.

Table 7

Descriptive statistics of variable constructs

	Mean	SD
Level of Business Process Reengineering	3.40	.69
Extent to which the organization depends on Business Process Engineering	3.57	.68
Training	3.54	.70
Effectiveness of Digital Transformation	3.62	.64

3.3.4 Correlation

A bivariate Pearson correlation was run to examine the associations between the study variables and the dependent variable. All the variables were positively and significantly associated with the dependent variable (Effectiveness of digital transformation).

The 'Level of Business Process Reengineering' was most highly correlated to 'Effectiveness of digital transformation' ($r = .758, p < .001$). The 'Extent to which the organization depends on Business Process Engineering' was most least correlated to 'Effectiveness of digital transformation' ($r = .691, p < .001$). None of the variables was found to be too highly correlated with Effectiveness of digital transformation, thus showing that there was no multicollinearity. Table 8 illustrates the Pearson correlation results.

Table 8

Pearson Correlation

		Level of Business Process Reengineering	Extent to which the organization depends on Business Process Engineering	Training	Effectiveness of Digital Transformation
Level of Business Process Reengineering	Correlation	1	.729	.705	.758
	Sig. (2-tailed)		<.001	<.001	<.001
Extent to which the organization depends on Business Process Engineering	Correlation	.729	1	.691	.746
	p-value	<.001		<.001	<.001
Training	Correlation	.705	.691	1	.735
	p-value	<.001	<.001		<.001
Effectiveness of Digital Transformation	Correlation	.758	.746	.735	1
	p-value	<.001	<.001	<.001	

3.4 Inferential statistics

H1: The level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation

A bivariate linear regression was constructed to examine the relationship between the Level of Business Process Reengineering and the Effectiveness of Digital Transformation. The independent variable was the Level of Business Process Reengineering while the dependent variable was Effectiveness of Digital Transformation. The regression model was statistically

significant: F (1, 193) = 260.32, p < .001, indicating that the Level of Business Process Reengineering is a significant predictor of the Effectiveness of Digital Transformation. Table 9 illustrates the results.

Table 9

Model summary for H1

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.758ª	.574	.572	.574	260.324	1	193	<.001

The positive beta coefficient (ß = .758) indicated that the Level of Business Process Reengineering has a positive effect on the Effectiveness of Digital Transformation.

Table 10

Coefficients for H1

Model	Unstandardized Coefficients	Standardized Coefficients		
	B	Beta	t	Sig.
(Constant)	1.212		7.963	<.001
Level of Business Process Reengineering	.708	.758	16.135	<.001

Based on the above findings of statistical significance, H1 was accepted.

H2: The extent to which the service delivery at a charity organization is based on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation

A bivariate linear regression was constructed to examine the relationship between the extent to which the service delivery at a charity organization is based on Business Process

Engineering and the Effectiveness of Digital Transformation. The independent variable was the extent to which the organization depends on Business Process Engineering while the dependent variable was Effectiveness of Digital Transformation. The regression model was statistically significant: $F(1, 193) = 242.74$, $p < .001$, indicating that the extent to which the organization depends on Business Process Engineering is a significant predictor of the Effectiveness of Digital Transformation. Table 11 illustrates the results.

Table 11

Model summary for H2

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.746ª	.557	.555	.557	242.739	1	193	<.001

The positive beta coefficient (ß = .746) indicated that the extent to which the organization depends on Business Process Engineering has a positive effect on the Effectiveness of Digital Transformation.

Table 12

Coefficients for H2

Model	Unstandardized Coefficients	Standardized Coefficients		
	B	Beta	t	Sig.
(Constant)	1.085		6.555	<.001
Extent to which the organization depends on Business Process Engineering	.710	.746	15.580	<.001

Based on the above findings of statistical significance, H2 was accepted.

H3: The extent to which the service delivery at a charity organization is based on Business Process Engineering mediates the relationship between the level of Business Process Reengineering and the effectiveness of Digital Transformation

In order to observe whether or not there is a mediation effect of the extent to which the service delivery at a charity organization is based on Business Process Engineering on the effectiveness of Digital Transformation, the mediator variable (the extent to which the service delivery at a charity organization is based on Business Process Engineering) was added to the model in H1, hence making it a multiple linear regression. The independent variable was the level of Business Process Reengineering while the mediating variable was the extent to which the organization depends on Business Process Engineering, and the dependent variable was Effectiveness of Digital Transformation.

As a whole, the multiple linear regression model was statistically significant: $F(2, 192) = 242.74$, $p < .001$, indicating that combined, the level of Business Process Reengineering and the extent to which the organization depends on Business Process Engineering significantly predict the Effectiveness of Digital Transformation. Table 13 illustrates the results.

Table 13

Model summary for H3

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.809[a]	.654	.651	.654	181.767	2	192	<.001

On observing the individual contribution of the variables to the model, each of the variables: the level of Business Process Reengineering (ß = .456) and the extent to which the organization depends on Business Process Engineering (ß = .414) have a positive effect on the Effectiveness of Digital Transformation. Table 14 depicts the regression coefficients for the H3 multiple linear regression analysis.

Table 14

Coefficients for H3

	Unstandardized Coefficients	Standardized Coefficients		
	B	Beta	t	Sig.
(Constant)	.766		5.009	<.001
Level of Business Process Reengineering	.426	.456	7.353	<.001
Extent to which the organization depends on Business Process Engineering	.394	.414	6.672	<.001

Since the addition of the variable 'Service delivery at a charity organization is based on Business Process Engineering' did not change the statistical significance of the variable Level of Business Process Reengineering, 'Service delivery at a charity organization is based on Business Process Engineering' was concluded as not a mediator in this model. Based on this finding, H3 was thus rejected.

H4: Training has a positive impact on the effectiveness of Digital Transformation

A bivariate linear regression was constructed to examine the relationship between Training and the Effectiveness of Digital Transformation. The independent variable was Training while the dependent variable was Effectiveness of Digital Transformation. The regression model was statistically significant: $F(1, 193) = 227.06$, $p < .001$, indicating that Training is a significant predictor of the Effectiveness of Digital Transformation. Table 15 depicts the results.

Table 15

Model summary for H4

Model	R	R Square	Adjusted R Square	R Square Change	F Change	df1	df2	Sig. F Change
				Change Statistics				
1	.735[a]	.541	.538	.541	227.061	1	193	<.001

The positive beta coefficient (ß = .735) indicated that the Training has a positive effect on the Effectiveness of Digital Transformation.

Table 16

Model summary for H4

	Unstandardized Coefficients	Standardized Coefficients		
	B	Beta	t	Sig.
(Constant)	1.205		7.379	<.001
Training	.682	.735	15.069	<.001

H5: Training moderates the relationship between the level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation

A moderation analysis was conducted in order to ascertain whether or not there is a moderation effect (interaction) between training and the level of Business Process Reengineering in influencing the effectiveness of Digital Transformation in charity organizations. The independent variable (Level of Business Process Reengineering) was added to a regression model together with training and an interaction variable (a product of training and Level of Business Process Reengineering).

As a whole, the multiple linear regression model was statistically significant in predicting the Effectiveness of Digital Transformation: $F(3, 191) = 128.413$, $p < .001$; as illustrated in Table 17.

Table 17

Model Summary for H5

Model	R	R Square	Adjusted R Square	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
1	.818[a]	.669	.663	.669	128.413	3	191	<.001

The coefficients table revealed that individually, neither Training ($ß = -.182$, $p = .396$) nor the Level of Business Process Reengineering ($ß = -.105$, $p = .623$) was a significant predictor in the model. Instead, it is the interaction variable that was significant in predicting the Effectiveness of Digital Transformation ($ß = 1.08$, $p = .005$); this indicating that there was a significant interaction effect. H5 was therefore accepted based on these findings. Table 6 illustrates these results.

Table 18

Coefficients for H5

	Unstandardized Coefficients	Standardized Coefficients		
	B	Beta	t	Sig.
(Constant)	2.594		3.971	<.001
Level of Business Process Reengineering	-.098	-.105	-.492	.623
Training	-.169	-.182	-.851	.396
Training*level of Business Process Reengineering	.158	1.080	2.829	.005

H6: The effectiveness of the Digital Transformation depends on the size of the charity organization.

A one-way analysis of variance test was conducted to determine whether or not there was a significant difference in the effectiveness of the Digital Transformation based on the size of a given charity organization. The independent variable was size of organization (a nominal variable with four levels namely; micro-company, small, medium, and large company). Effectiveness of digital Transformation was the dependent variable. Table 19 illustrates the mean and standard deviation statistics of the dependent variable across each of the four groups of the independent variable.

Table 19

Descriptive statistics for H6

| | Mean | Std. Deviation | 95% Confidence Interval for Mean | |
			Lower Bound	Upper Bound
Micro-company	3.3083	.65613	2.9450	3.6717
Small company	3.5833	.58619	3.4512	3.7155
Medium company	3.7128	.69740	3.5615	3.8641
Large company	3.6042	.57081	3.3203	3.8880

The ANOVA test was however not significant: $F(3, 191) = 1.86$, $p = .138$. Based on this finding, H6 was not accepted, as shown in table 20 below.

Table 20

ANOVA table for H6

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.290	3	.763	1.860	.138
Within Groups	78.393	191	.410		
Total	80.682	194			

The following table summarizes the six hypotheses of this study and their respective statistical outcomes.

Table 21

Summary of hypotheses testing results

No	Hypothesis	Accepted/Rejected
H1	The level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation	Accepted
H2	The extent to which the organization depends on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation	Accepted
H3	The extent to which the service delivery at a charity organization is based on Business Process Engineering mediates the relationship between the level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation	Rejected
H4	Training has a positive impact on the effectiveness of Digital Transformation	Accepted
H5	Training moderates the relationship between the level of Business Process Reengineering and the effectiveness of Digital Transformation	Accepted
H6	The effectiveness of the Digital Transformation depends on the size of the charity organization.	Rejected

3.5 Discussion

The findings of this study indicated that the level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation. This means that a higher level of Business Process Reengineering will result in even higher levels of effectiveness of the digital transformation. This study's findings align with the findings of Ahmad and Van Looy (2020) that BPR is indeed a strategic approach in digital transformation initiatives. Literature had also indicated that the use of Business Process Reengineering (BPR) in the charitable organizations

underscores the enhancement of operational efficiency through the point of utilizing the latest technological tools and techniques (Cipriano & Za, 2023; Gooyabadi et al., 2023). These findings are also consistent with the finding that BPR, and more specifically the integration of digital technologies in BPR, also affords charitable organisations the chance to advance several key factors for donor trust such as transparency and accountability (Ahadi, 2004).

The findings of this study indicated that the extent to which the organization depends on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation. Literature had shown that BPR frameworks and methodologies offer an organization an identified structure to guide through the reengineering process (Hammer & Champy, 2009; Sudha and Kavita, 2019). The findings of this study are consistent with this assertion since the reengineering process has been shown by this study as a foundation that encompasses leadership, time, commitment, and strategic implementation which results in proper service delivery in charitable organizations.

It was found that the extent to which the organization depends on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation. This means that the more BPR is incorporated into departments, the higher the effectiveness of digital transformation, and vice versa.

This study also found out that the extent to which the service delivery at a charity organization is based on Business Process Engineering does not mediate the relationship between the level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation. This is just to mean that whereas it is important for BPR to cut across all departments, the cutting across does not necessarily explain how the BPR adoption levels affect digital transformation. Instead, the level of adoption and the extent to which BPR cuts across departments are independent factors. This finding is consistent with the findings of Aldakhil (2016), Hammer & Champy (2009) and Plahotnikova (2019) which have shown multisectoral implementation of BPR from back-office to banks, healthcare and telecommunication sectors.

The usefulness of BPR had also been illustrated by Chui and Chan (2019) when they showed how technology has impacted volunteer recruitment and matching as a process where the pool of volunteers has been enlarged and the kind of volunteer assigned to the task is more exact. Also in line with the findings of this study, charitable organizations are benefiting from the use of

digital markets to extend their coverage and enhance the effectiveness of fundraising (Afandi et al., 2024; Zhou and Ye, 2021)

This study found out that training has a positive impact on the effectiveness of Digital Transformation. This was consistent with the findings of Al-Baher (2024) and Nicolás-Agustín et al. (2024) that underscored that ICT training is a direct determinant of company performance on account of its effects on human capital and organizational commitment. This also alighns with the assertions that training in digital competencies is an essential tool, which helps to bring the necessary changes in employees' profiles when talking about transformation in the context of digitalization (Taruchain-Pozo & Avilés-Castillo,2023; Talafidaryani, 2023). Training also moderates the relationship between the level of Business Process Reengineering has a positive impact on the effectiveness of Digital Transformation. This means that training is a catalyst of how effective the digital transformation will be. Better training will facilitate even higher levels of effectiveness and vice versa.

Although literature had indicated that organizational size could influence the effectiveness of digital transformation efforts (Martínez-Morán et al., 2024; Ferraz et al., 2020) this study found out that the effectiveness of the Digital Transformation does not depend on the size of the charity organization. This alighns with Clemente-Almendros et al. (2024)'s assertion that even though size matters, it is not the sole determinant of digital transformation success.

On overall, the findings of this study also concur with the BPR framework that grounded the study. As revealed in the literature, Business Process Reengineering (BPR) has been shown to be a collection of drastic activities that involve the redesigning of current business processes in order to reduce cost, improve quality, or enhance speed and service delivery in charitable organizations (Davenport, 1993; Hammer and Champy, 2009). It has further been shown that BPR therefore works by restructuring business processes in such a way that productivity, efficiency and levels of customer satisfaction are enhanced - just as had been envisioned in the literature (Gathari et al., 2014; Zuhaira & Ahmad, 2021; Al-Shammari, 2023).

This study has therefore demonstrated that BPR is not only a means to digital transformation effectiveness but a methodical approach to building solutions into core business processes of charitable organizations. It is in fact a stronger methodology than the other methodologies which only include new technologies in existing business processes that create

parallel. Through training and sufficient levels of implementation, BPR helps to integrate technology into redesigned work, making all the changes more efficient and data-driven.

CONCLUSIONS AND RECOMMENDATIONS

1. Through a comprehensive review of literature, this study revealed that digital transformation in charitable organizations is a way of technologically solving issues and enhancing the delivery of services, productivity, and capability to fulfil social functions. Digitalization was shown to play a vital role in solving global issues, for example the achievement of the sustainable development goals like Zero Hunger through charitable organizations.

2. Review of literature also revealed BPR frameworks and methodologies as identified structures that help guide through the reengineering process. This model was shown to have been successfully used in different sectors to optimize the performance of organizations.

3. The study also found out that Business Process Reengineering significantly improves the effectiveness of Digital Transformation efforts in charitable organizations. Specifically, the higher the level of Business Process Reengineering implementation, the greater the effectiveness.

4. This study revealed BPR to be strategic approach in digital transformation initiatives. The findings of this study indicated that the extent to which the organization depends on Business Process Engineering has a positive impact on the effectiveness of Digital Transformation.

5. This study revealed that training has a positive effect on digital transformation effectiveness and also moderates the relationship between the level of Business Process Reengineering and Digital Transformation.

6. This study found out that the effectiveness of the Digital Transformation does not depend on the size of the charity organization.

7. Based on these findings, the study recommends widespread adoption of BPR strategies across all departments of charity organizations because the more widespread the use of BPR, the better the performance.

8. This study also recommends strong training programs, to teach employees how to go about any new systems that are put in place; as this study showed training to be a catalyst for the success of BPR initiatives. Training also helps employees to adapt to any transformations that come with new systems thus improving organizational outcomes. Charitable

organizations should therefore invest more into the training of their employees and stakeholders.

9. This study has demonstrated BPR as a dependable methodology for exploring processes in charitable organizations. Future research should therefore put more into practice more usage of BPR frameworks to enhance their adaptability for charitable organizations, especially with a focus on technology integration.

10. This study was not looking at any specific charity sector or region. Future studies could explore the applicability of BPR in different parts of the world.

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Appendix 1: Survey

Hello!

My name is Amit Kumar Sah. The aim of this study is to examine the efficacy of harnessing digital transformation in bringing about better outcomes from various business processes involved in charitable organizations.. The survey will take approximately 4-5 minutes. Participation in this survey is anonymous as no identifying information is being collected or attached to your responses. Please note that there are no good or bad answers in this survey. As such, kindly remember to complete the survey with fairness and carefulness in order to facilitate accurate findings. Please note that upon completion of the study, you can access the results of the study through the link you used to complete the survey.

Thank you for taking the time to participate in this survey.

Please indicate the option that best applies to you

1. Gender

   - Male

   - Female

2. Age

   - 18-25 years old

   - 26-35 years old

   - 36-45 years old

   - 46-55 years old

   - 56 years and above

3. Organizational size (number of employees)

   - 1 - 10 (Micro-company)

   - 11 - 50 (Small company)

   - 51 - 500 (Medium company)

   - More than 500 (Large company)

On a scale of 1-5 (1 = strongly disagree, 5 = strongly agree), Please rate your level of acceptance with the statements provided.

Level of Business Processes Reengineering

1. When our organization processes reengineered, the level of the reengineering process was successful.
2. When our organization processes reengineered, organizational leadership focused on its processes during the reengineering effort.
3. When our organization processes reengineered, organizational leadership spent a lot much time on current processes during the reengineering effort.
4. When our organization processes reengineered, organizational leadership had strong executive leadership commitment during the reengineering effort.
5. When our organization processes reengineered, organizational leadership was not timid during the reengineering effort.
6. When our organization processes reengineered, organizational leadership went from a conceptual design phase right into an implementation during the reengineering effort
7. When our organization processes reengineered, organizational leadership took too long to complete its reengineering

Extent to which service delivery at the organization is based on Business Process Engineering

1. Service delivery at the organization depends on re-engineered systems in place
2. Staff at the organization have integrated with the system in place
3. Service delivery at the organization depends on the re-engineered process in place
4. Staff at organization understand the reengineered process adopted.
5. Service delivery at organizations depends on the technology used
6. Technology adopted at organization has improved service delivery
7. Donors are willing to invest in the organization's digital concept in provision of service delivery

Training

1. Our organization conducts extensive training programs for its employees in all aspects of quality.

2. Employees in each job will normally go through training programs every year.

3. Training needs are identified through a formal performance appraisal mechanism.

4. There are formal training programs to teach new employees the skills they need to perform their jobs.

5. Training needs identified are realistic, useful and based on the business strategy of the organization

6. A trainee has been given an opportunity to perform learned skills

7. The training I received helped me to enhance high quality of product/service effectively

Effectiveness of Digital Transformation

1. Digital transformation improves our clients' experiences.

2. Digital transformation improves the whole organisation's productivity.

3. Digital transformation improves the productivity of people in my team/department.

4. The new system improves our organisation's services.

5. Digital transformation improve our productivity.

6. Digital transformation improve the organisation's return on investment

7. The new digital system is more secure.

8. All resources are easier to access in the new system.

Appendix II – SPSS Output

Level of Business Process Reengineering

Reliability Statistics

Cronbach's Alpha	N of Items
.752	7

Item Statistics

	Mean	Std. Deviation	N
When our organization processes reengineered, the level of the reengineering process was successful.	3.15	1.087	195
When our organization processes reengineered, organizational leadership focused on its processes during the reengineering effort.	3.17	1.079	195
When our organization processes reengineered, organizational leadership spent a lot much time on current processes during the reengineering effort.	3.34	1.125	195
When our organization processes reengineered, organizational leadership had strong executive leadership commitment during the reengineering effort.	3.52	1.067	195
When our organization processes reengineered, organizational leadership was not timid during the reengineering effort.	3.55	1.167	195
When our organization processes reengineered, organizational leadership went from a conceptual design phase right into an implementation during the reengineering effort	3.50	1.114	195
When our organization processes reengineered, organizational leadership took too long to complete its reengineering	3.56	.963	195

Extent to which service delivery at the organization is based on Business Process Engineering

Reliability Statistics

Cronbach's Alpha	N of Items
.781	7

Reliability

Item Statistics

	Mean	Std. Deviation	N
Service delivery at the organization depends on re-engineered systems in place	3.37	1.030	195
Staff at the organization have integrated with the system in place	3.54	1.075	195
Service delivery at the organization depends on the re-engineered process in place	3.54	.980	195
Staff at organization understand the reengineered process adopted	3.80	.956	195
Service delivery at organizations depends on the technology used	3.65	1.085	195
Technology adopted at organization has improved service delivery	3.65	1.037	195
Donors are willing to invest in the organization‚Äôs digital concept in provision of service delivery	3.43	1.049	195

Training

	Reliability Statistics
Cronbach's Alpha	N of Items
.783	7

Scale: Training

Item Statistics

	Mean	Std. Deviation	N
Our organization conducts extensive training programs for its employees in all aspects of quality	3.39	1.002	195
Employees in each job will normally go through training programs every year	3.46	1.104	195
Training needs are identified through a formal performance appraisal mechanism	3.60	1.037	195
There are formal training programs to teach new employees the skills they need to perform their jobs	3.73	1.052	195
Training needs identified are realistic, useful and based on the business strategy of the organization	3.51	1.057	195

A trainee has been given an opportunity to perform learned skills	3.64	.987	195
The training I received helped me to enhance high quality of product/service effectively	3.46	1.141	195

Effectiveness of Digital Transformation