SOCIAL MEDIA MARKETING AND PERFORMANCE OF PUBLIC PRIVATE PARTNERSHIP PROJECTS: A CASE STUDY OF KONZA TECHNOPOLIS
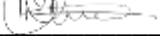
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A RESEARCH PROPOSAL PRESENTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN PROJECT PLANNING AND MANAGEMENT FACULTY OF BUSINESS AND MANAGEMENT SCIENCES UNIVERSITY OF NAIROBI

2023

DECLARATION

This project is my original work and has not been presented at any other university.
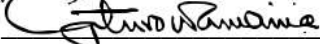
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This project has been submitted for examination with my approval as the university supervisor.

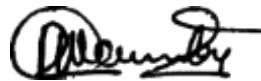Signature: _____   Date: July 24, 2023

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DEDICATION

This research project is dedicated to my husband and daughter, who have shown unwavering patience, understanding, and moral support during the entire writing and research journey. Their constant encouragement and strength have been instrumental in pursuing my academic aspirations. Their love and steadfast presence have been priceless, and I deeply appreciate their role in my life.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS AND ACRONYMS

ICT	Information and Communications Technology
IDT	Innovation Diffusion Theory
KoTDA	Konza Technopolis Development Authority
PMIS	Project Management Information Systems
PPPs	Public, Private Partnerships
SMEs	Small and Medium Enterprises
SMM	Social Media Marketing
STEM	Science, Technology, Engineering and Mathematics
TTF	Task-Technology Fit
WST	Work Systems Theory

ABSTRACT

The primary objective of this research was to analyze the influence of social media marketing on the performance of Public Private Partnerships (PPPs) projects, utilizing the specific case of the Konza Technopolis project in Kenya. The research encompassed three main objectives: an evaluation of social media tools' utilization in project management, the determination of the significance of social media tools in project management, and the identification of effective social media strategies for marketing the Konza Technopolis initiative. Konza Technopolis constitutes a smart city project aligned with the Kenya Vision 2030 development roadmap, aiming to elevate the nation into a middle-income status through industrialization. The project boasts an estimated budget of $14.5 billion, wherein the Kenyan Government contributes 10 percent towards horizontal infrastructure and the private sector funds vertical infrastructure. The endeavor has encountered obstacles including limited public awareness, unfavorable perceptions, political interference, and funding delays triggered by sluggish economic growth. In the realm of project management, effective communication is pivotal, particularly in the face of challenges posed by dispersed stakeholders and project teams. The diverse communication options offered by social media platforms can significantly enhance project efficiency, thereby rendering them indispensable tools for project managers. Nevertheless, the adoption of social media strategies in project management has been gradual and inconsistent, with limited comprehensive research on their holistic application. Ethical and privacy concerns further hinder the integration of social media into project management. The exact impact of social media strategies on project management remains ambiguous, with limited insights into their external project management applications. This study, drawing on the framework of the Innovation Diffusion Theory (IDT), endeavored to explore the potential integration of social media into project management to amplify the visibility of PPP projects such as the Konza Technopolis initiative. Employing a mixed-method approach, data were gathered from project managers across various sectors within Konza Technopolis to identify optimal social media strategies for managing project partners, project monitoring and evaluation, and enhancement of public relations. The study also assessed the intrinsic importance of social media tools in project management and their contribution to the uptake of PPP projects. Data collection involved questionnaires and analysis of social media reports, facilitated by a descriptive research design aimed at deciphering the factors influencing the effective assimilation of social media strategies in project management. The findings bear significant implications for knowledge management, underscoring the role of social media tools in instantaneous information exchange, knowledge retention, and revitalization. Additionally, the study offers a systematic assessment of social media tools and strategies in project management, thereby laying the groundwork for future research initiatives. Notably, the descriptive findings revealed extensive employment of social media tools in project management at Konza Technopolis. Platforms such as Instagram, Twitter, Facebook and LinkedIn were utilized for stakeholder engagement, project updates, and promotional endeavors. The study acknowledged the notable influence of these tools on collaboration, communication, and leadership within project teams, ultimately precipitating cultural shifts. The tools facilitated seamless work operations irrespective of geographical location, fostering information dissemination, optimization of initiatives, and identification of areas necessitating improvement within projects. Moreover, the research identified several effective social media strategies for marketing Konza Technopolis, including the utilization of social media influencers, advertising, contests, and promotions. Social media influencers were found to be

efficacious by 65 percent of the respondents, with 55 percent affirming the effectiveness of social media advertising. The study underscores the advantages of social media tools over traditional project management methods, encompassing heightened productivity, enriched collaboration and communication, and financial gains. The study proposes the adoption of social media platforms like Facebook, Twitter, LinkedIn, and Instagram for project communication and marketing, advocating diverse social media strategies for promoting smart cities. The application of linear regression unveiled that social networks, blogging, events, and microblogging significantly contributed to variations in visibility, emphasizing their pivotal role in shaping the prominence of Konza Technopolis. The outcomes of this research hold the potential to influence governmental policies related to projects and to chart novel directions for expediting the adoption of smart city marketing strategies in Africa. Moreover, the study enhances the knowledge pool within project management, providing valuable recommendations for project managers seeking to harness the potential of social media for bolstering project success.

CHAPTER ONE: INTRODUCTION

1.1   Background of the Study

The essence of project management has been emphasized globally, encompassing various contexts and concepts. Good project management has been outlined to bring direction and leadership to undertaken projects Chandra, P., Grabis, J., & Wierzchon, S. (2012). asserts that project management is responsible to making remarkable direction as well as giving a project definite control through leadership. Project management enables the division of milestones and throughout the project life and thus resulting to better performance of the team members and subsequently the project at large (Gitamo, 2018). Through project management, organizational goals are shared through a shared vision, mission and objectives. Project management is also responsible for creating an enabling environment where team members are motivated, trained, coached and inspired to do their very best in their duties and roles (Remidez & Jones, 2018).

Within the realm of project management, well-defined accountability and distinct roles are established for each team member, minimizing any potential confusion. Consequently, every team member bears a collective responsibility for the project's outcome, whether successful or not. Project management establishes structured processes and protocols aimed at guiding the project towards success (Gasemagha & Kowang, 2021). In the earlier phases, the scientific approach to project management (emerging during the 1960s) predominantly dealt with technical aspects concerning the tangible project outcomes (Engwall, 2003). This is because the projects were mainly long-lasting and single endeavours ran in a very fixed environment (Spalek, 2014). The project results were frequently limited to military areas and construction, using different techniques and tools to offer support in managing single projects. However, due to

increased quantity of world projects, new opportunities and threats emerged (Dönmez, 2018; Hysa & Spalek, 2019).

New opportunities and threats were primarily linked to the swift development of education as well as technology resulting to increase in the latest techniques and tools in managing projects across the world (Spalek, 2016). In respect to this, projects are carried out in every disciple and sector and thus resulting to multi-project environments involving different multi-disciplinary players and team members as outlined by Aritua, Smith, and Bower, (2009). In this project management development, projects became more dynamic and required a change in project management approaches and its management tools (Zhang, Shafiq, Akbar, Khan, Hussain, Fazal-E-Amin, and Soofi, 2018). In addition, this diversification of management teams led to the inclusion of experts from various disciplines in both the planning and execution phases of projects (Gilson, Maynard, Young, Vartiainen, & Hakonen, 2015).

As the project management filed grew, the environment also kept changing as well as the level of globalization which resulted to new challenges that required new specialization (Pastuszak & Chadam, 2013). In respect to this, more projects are formed each day and project team members are formed in regular basis. In this, there is a need to embrace information and communication technology to share the new and evolving knowledge and in virtually bringing together different team members across the globe (Vaagaasar & Kokkonen, 2018). This evident in international projects carried out by different team members located in different countries (Rimkuniene & Zinkeviciute, 2014). In addition, Information and Communications Technology (ICT) facilitates and provides new tools for project management and led to the adoption of diverse and most recent technological styles (Xu & Li, 2018) in cloud computing (Ooi, Lee, Tan, Hew, & J. Hew, 2018) and computer science (Wauters & Vanhoucke, 2016).

Most studies, however, discuss focus on the project initiation, planning, monitoring, and execution as well as project final deliverables without consideration of project execution environment (Jafarzadeh, Akbari, & Abedin, 2018); Jiang, Lin, & Qiang, 2015). The present research contends that social media, as a facet of information and communication technology, holds substantial potential for managing projects across various dimensions, including the coordination of project partners, monitoring and evaluation, public relations, and numerous other facets. For example, social media has been used extensively for public relations purposes in project implementation to management various project stakeholders to avoid opposition and defiance of local groups and other stakeholders which could cause delays in project implementation or even project failures and overruns.

Existing research has predominantly focused on the utilization of social media during the initial stages of project planning, rather than its application in project monitoring and execution (Mesquita et al., 2016; Winter & Chaves, 2017; Vadhanasin et al., 2017). Bashir, Nadia, and Papamichail's (2017) study, for instance, illustrates the use of social media within project management primarily for gathering stakeholder preferences and insights related to associated projects. This study discerns a gap in the deployment of social media for tracking trends in market dynamics, communication strategies, evaluation procedures, monitoring protocols, services, tools, and products, thereby facilitating the provision of informed viewpoints on market trends, services, and products.

Considering the dynamic nature of social media adoption, there exists no universal framework for integrating social media into project management (Fichtner, 2018). Consequently, there is an imperative to harness the latest technological advancements

to fortify project management opportunities and mitigate potential threats to project success.

To address this research void, the current study was grounded in the Innovation Diffusion Theory (IDT). This theoretical framework serves to elucidate the factors that could impact the adoption of novel technologies (Khalil et al., 2010). With the increase and widespread internet connectivity across the globe, ICT use and adoption has been steadily growing in each sector. To a large extent ICT and specifically social media have been used to create and achieve competitive advantage. However, many projects have to a large extent failed to effectively realise promised benefits from ICT adoption in project management due to lack of perfect understanding on the possible correlation between processes and factors influencing ICT adoption and project implementation. Peansupap and Walker (2005) asserts that the strategic ICT execution planning needs to consider issues of technical support, critical management support, ICT users' characteristics and a supportive work environment so that the framework processes offered can be applied effectively. This study, therefore, endeavours to lay out an ICT innovation diffusion organisational level framework focusing on social media tools. The study further seeks to specifically provide insights about how social media tools may be adopted and applied to improve project performance at different implementation stages for Konza Technopolis.

1.1.1 Social Media

Social media serves as a potent platform for facilitating interaction among individuals, allowing them to engage in activities such as commenting, content sharing, information exchange, and virtual team collaboration. According to Haenlein and Kaplan (2010), the concept of social media pertains to the methods and strategies employed by individuals and organizations to engage in information and idea creation, sharing, and

exchange within networks and virtual communities. Social media results in extensive changes in the way communication is done between organizations, communities and even one on one among individuals. Social media may be a highly effective type of marketing which will increase sales, brand loyalty, brand awareness and customer service. The platform presents business brand stories to many people globally. According to Kemp and Fisher (2022), the world's population was 7.8 billion in 2021, which can grow by one percent yearly. The statistics show that the quantity of populations has increased by over 80 million globally since 2020.

Moreover, there is a global internet penetration rate of 59.5 percent, with a total of 4.2 billion users engaged in social media. These figures also indicate an annual growth rate of 490 million users, reflecting a 13 percent increase compared to the overall world population. This underscores that 53 percent of the global populace actively participates in social media usage. This signifies that an extensive 53 percent of individuals around the world can be reached through the diverse array of social media platforms available. It is also noteworthy that two-thirds of the worldwide internet users are active on social platforms, highlighting the escalating integration of these platforms by businesses and projects for customer engagement. Prominent among the preferred social media platforms are Twitter, Myspace, TikTok, Facebook, WhatsApp, Instagram, YouTube, LinkedIn, and Flickr.

According to Kemp and Fisher (2022), 22.9 million internet users were observed in Kenya in January 2020, while a rise in users escalated by 3.2 million (16 percent) between 2019 and 2020. In January 2022, internet penetration was 43 per cent, while social media users were at 8.8 million. The statistics show that social media usage increased by 1 million (13 percent) between April 2019 and January 2020; the penetration was 17 per cent in January 2020. The statistics explain why most project

managers consider applying social media to projects today. The benefits and impacts of social media on projects have not received the same level of recognition as other marketing tools. Social media has brought about a transformation in communication within the realm of project management. It has ushered in a shift in communication dynamics among diverse project team members and the sharing of project-related information among various stakeholders. Consequently, social media has been observed to improve information management and enhance collaboration among team members in the execution of their roles during project implementation.

The incorporation of social media into project management has brought about a transformation in how the younger generation disseminates information throughout the project lifecycle, adopting social media as the primary means and platform for communication, collaboration, and cooperation among stakeholders (Bolton et al., 2013; Popescul & Georgescu, 2013; Bennett et al., 2008). Hysa and Spalek (2019) highlight several advantages associated with the utilization of social media in project management, which validate its application and implementation. However, their study also uncovers that the use of media in various contexts presents both opportunities and challenges to users in diverse ways. Particularly, the integration of social media into project management has been identified to enhance engagement, communication, and collaboration among different project stakeholders. Additionally, it contributes to the seamless flow of project-related data and knowledge across stakeholders and throughout various project management phases (Daemi et al., 2020). The author adds that the use of social media tools in project management improves the productivity of the team members through proper tracking of progression and performance. Social media usage gives cost-effective solutions. Virtual teams reduce travel costs for meetings, help project personnel's engagement, and increase team members'

participation in information sharing, project discussions, and decision-making (Daemi et al., 2020).

The availability of techniques and tools designed for project management is currently limited. This scarcity can be attributed to the inadequate supply of tools, which does not keep pace with the growing demand within project management. Moreover, given the evolving nature of social media's application in project management, the tools developed for this purpose struggle to keep up with the rapid changes. A notable challenge lies in the difficulty of attributing the practical impact of utilizing social media tools in project management to various facets of project execution for the purpose of evaluating its overall success or failure (Remidez & Jones, 2012). The security concerns and potential vulnerabilities associated with the use of social media in project management have also been raised (Perera et al., 2017).

Perera et al. (2017) further underscores that employing social media for project management has been linked to issues like information overload, a lack of well-defined strategies to encompass the multifaceted aspects of project management, and inadequate support for its implementation from project stakeholders and team members. Additionally, there exists a blurred distinction between professional and informal usage of social media in project management. Furthermore, a significant portion of project team members have yet to recognize the value and potential benefits of integrating social media into project management (Perera et al., 2017).

Considering the essential role of social media tools in driving innovation, this study proposes that organizations and project stakeholders should comprehend the role of social media in project management, acknowledge its potential advantages and associated challenges, and embrace its incorporation and application in managing diverse projects.

1.1.2 Social Media Marketing

Marketing is described as a promotional activity that aims to influence customers into purchasing specific goods, products, and services with the intent of boosting sales (Kotler & Keller, 2008). It involves identifying, predicting, and fulfilling customers' needs, wants, and expectations while also generating profits (The Chartered Institute of Selling, 2015). The American Marketing Association (2012) emphasizes that marketing can encompass various methods and practices executed through diverse channels of information. This association further defines marketing as the process of addressing customer needs and desires while also satisfying them through the exchange of goods, products, and services.

Within the domain of project management, marketing pertains to the act of communicating, creating, and exchanging information, making project deliverables available for the benefit of clients, partners, stakeholders, and the wider society (Dalcher, 2018). Consequently, project management-oriented marketing should lead to the identification of stakeholder needs and satisfaction (Dalcher, 2018). While Social Media Marketing (SMM) is prevalent in academic and e-marketing landscapes during this digital age, it is gradually gaining acceptance within practical contexts, research, and professional spheres (Shaltoni, 2017). SMM empowers organizations to disseminate information about services, goods, or products to potential customers or beneficiaries through a range of social media platforms and websites (Felix et al., 2016). Prominent social media platforms encompass Twitter, MySpace, TikTok, Facebook, WhatsApp, Instagram, YouTube, LinkedIn, and Flickr. These platforms include built-in tools for data analysis, allowing advertising entities to monitor and assess their company's progress and engagement performance as indicators of success or challenges. By leveraging social media platforms for marketing, companies can

effectively reach a broad spectrum of project stakeholders, including current, potential, and future clients. SMM also facilitates the establishment of public relations with the general public, employees, journalists, and bloggers, contributing to a positive brand or project reputation. Successful implementation of SMM involves delivering pertinent messages to the appropriate recipients, thereby enhancing the brand or project's standing (Njoroge, 2018). The role of public relations centers on cultivating and maintaining a favorable public perception of a company, organization, or project. As highlighted by Dottori et al. (2018), public relations strives to shape public opinions and enhance awareness of a brand or operations.

Strategically, SMM orchestrates an organization's marketing campaign and strategies, playing a pivotal role in shaping its image by defining the desired scope and organizational culture. Through SMM, customers and other stakeholders can openly express their perspectives on a particular product, service, or project, thereby generating publicity. Despite the significance of project marketing for stakeholders and society, there remains limited understanding among project team members regarding its application and benefits. This study aims to augment comprehension of the significance and utilization of social media in project marketing by conducting further research on tools and the nature of project marketing.

1.1.3 Konza Technopolis

Konza City project is located in Malili Ranch along Mombasa Road and 60 kilometres from Nairobi, Kenya. The project which occupies 5,000 acres of land was commenced in 2009 in order to form Kenya's Silicon Savannah. The city is being developed as a Public Private Partnerships (PPPs) in which the Government of Kenya seeks to major of horizontal infrastructure. The plan of Konza City is a mixed-use plan that accommodates high density population and infrastructure and contains several diverse

districts and involves several programmes and activities. Konza City aims to offer a liveable and sustainable environment in urban set up and seeks to provide high-value development and land use with good roadways and networks across the city. In respect to this, the city will offer integrated infrastructure and ICT network to link and connect all city services and thus ensuring efficient delivery of services. In addition, the city will offer an innovative framework from which environment, utilities, public safety, and transport will be integrated. Services to citizens and city services such as information, planning and development as well as business service such as commercial support services will be integrated to offer all-inclusive approach to residents' needs.

Konza City will embed data in intelligent devices and gather data like buildings, roadways, and other assets as a wise city. Data collected are examined by software that delivers valuable information and is shared through an intelligent communications system, thus digitally enhancing services to the residents. With respect to this, the city is designed to have roadway sensors to monitor traffic of vehicles as well as pedestrian. The sensors are able to adjust to control spotlight timing in order to give optimum traffic flow. The city further hosts a university, offices and sciences and technology area. These facilities are interconnected with a framework and network of roads. The plan also contains several recreational grounds for the community with capacity to serve diverse recreational orientations. The recreational grounds are further connected with parks and transportation corridor and avenues.

The completion of Konza Technopolis Authority (KoTDA) will be critical to the longer term of Kenya because it will make the country competitive both regionally and globally as well as elevating the county to a middle-income earning county by the end of 2030. It is estimated that by the end of the first phase of development of Konza City, it will be able to offer 17,000 direct jobs. At the end of 2030, Konza City will be able

to host 200,000 residents and become a world leading and top-notch technology hub able to generate high revenues to the country evident through the growth of Gross Domestic Product (GDP). At this time, it is also expected that the city will have world-class technology and infrastructure in facilitating higher education and research as well as innovation and business using ICT services. This is hoped to attract investors both locally and international who will be able to establish smart cities such as technological hubs of diverse scales and sizes. This will in return result into a catalysed economic development up to over KSh 90 billion additional GDP to Kenya. When fully built, Konza City will be able to yield several benefits to the country including 260,000 jobs and hosting 30,000 households as well as accounting for over 5 percent of country's GDP.

1.2   Problem Statement

The Kenyan Government announced a Kenya Vision 2030 flagship project in 2009, dubbed Konza Technology City. The inauguration of this smart African city was planned for 2020. Only three of the eight designed buildings have, however, been completed because of several interruptions due to economic, political, and administrative issues, which have led the investors to be put on hold. The project was estimated to cost $14.5 billion. The government promised to finance 10 percent of the budget for Konza horizontal infrastructures. By 2021, $800 million have been invested, while the private sector will provide the rest of the funding to build vertical infrastructure. However, creating KoTDA as a legal entity was delayed until 2013 due to introduction of a tedious acquisition procedure by the National Land Commission in 2012. In 2019 the Konza complex, a mixed-use building with a conference hall, hotel, and offices was, however, completed. In addition, in 2020, phase one of the national

data centre was completed for government agencies and ministries to migrate their data, whose services will also be available for private entities in the commercialisation plan. Currently, the project focuses on developing the horizontal infrastructure, which is approximately 50 percent complete and was anticipated to be finalised by December 2021. Progress has been made to construct water reclamation systems, roads, and utility corridors, however, there are concerns about what needs to be done to accelerate KoTDA completion. Since its inception, Konza City has faced many challenges, which includes a lack of public awareness of the project, a negative perception of the project since it was viewed as a white elephant, political interference, delays in project implementation due to delays in funds and less funding targeted at infrastructure projects due to slow economic growth.

Effective communication functions as a driving force within the project management framework. Challenges faced by projects, such as the geographical dispersion of stakeholders and project teams, necessitate project managers to stay current by observing and adopting the optimal resources available for maintaining consistent communication across all project stakeholders. Achieving this can be efficiently facilitated through the utilization of social media tools, which offer a diverse array of communication options that enhance project efficiency. To enhance social media strategies within project management, a comprehensive comprehension of how to adeptly employ media tools in project management is essential.

Nevertheless, comprehensive research exploring the holistic utilization of social media strategies in project management remains limited. Noteworthy studies conducted by Daemi et al. (2020) and Zhang et al. (2018) have highlighted how social media has been harnessed for the purpose of project communication. These studies demonstrate how social media can virtually bridge the gap among individuals, consequently enhancing

12

relationship management and interactions. Social media has instigated transformative changes in communication patterns, becoming an integral aspect of project collaboration. Given these advantages, it is anticipated that project managers would be at the forefront of adopting social media platforms as a means of communication and other pivotal aspects across the project life cycle, thereby ensuring project success.

Despite the showcased opportunities and benefits expounded by Mathur et al. (2021) and Hysa and Spalek (2019), the integration of social media strategies into project management has encountered sluggish and inconsistent adoption. The realm of project management is fraught with uncertainties, and the materialization of threats negatively impacts project objectives (Kaplan & Haenlein, 2010). Inclusive enumeration of social media threats pertinent to project management is crucial, fostering adoption and mitigating uncertainty. Additionally, Rosenberger et al. (2017) delineated social media threats distinct from those identified in project management by Hysa and Spalek (2019). This divergence implies that inadequate exploration and mitigation of barriers and threats to social media tool utilization in project management could hinder tool efficacy. Moreover, inconclusive findings regarding the impact of social media strategy usage in project management, especially when considering ethical principles and privacy concerns, have surfaced. This lack of clarity could erode trust among project stakeholders and potentially lead to political interference, subsequently causing implementation delays. Furthermore, scant information exists regarding the external employment of social media in project management. Additionally, established practices for seamlessly integrating social media tools into effective project management are scarce. Prior studies have not undertaken a comprehensive exploration of these factors; therefore, this study strives to fill this research gap.

1.3   Study Objectives

This research endeavoured to examine the potential utilization of social media tools for marketing Konza Technopolis. The specific objectives encompassed:

(i) Assessing the utilization of social media tools within the context of project management.

(ii) Gauging the significance of social media tools in the realm of project management.

(iii) Identifying viable social media strategies tailored for the marketing of Konza Technopolis.

1.4   Significance of the Study

Focusing on Konza Technopolis, this research elucidated the role of social media tools in enhancing the adoption of smart cities among stakeholders. The research aimed to discern the most effective social media tools for advertising within the context of Kenya. Consequently, this study contributes to the understanding of the integration of social media into project management, has the potential to influence certain governmental project policies, and introduces an alternate trajectory for marketing smart cities in Africa, potentially expediting their adoption.

In the realm of knowledge management, the research unearthed how social media tools facilitate rapid and comprehensive information exchange among project experts and participants, thereby enabling the storage and revival of knowledge through established mechanisms. Furthermore, the study furnished a methodical assessment of social media tools and strategies within the sphere of project management, serving as a foundational platform for future inquiries.

CHAPTER TWO: LITERATURE REVIEW

2.1   Introduction

Given the dispersed nature of project teams and stakeholders, project managers must seek out optimal resources to ensure seamless communication among all involved parties. This section delves into the foundational theories and models that underpin the utilization of social media tools for project marketing. The chapter offers an overview of existing literature on Social Media Marketing (SMM) from a global, regional, and local perspective, as previously examined by researchers. It delves into the theoretical foundation that gave rise to the notion of marketing within the project context, while also providing an exhaustive examination of earlier research conducted on the intersection of SMM and project marketing. Furthermore, this chapter examines the conceptual framework, coupled with an empirical review that elucidates the interrelation between the dependent and independent variables in this study.

2.2   Theoretical Review

The theoretical exploration delved into the foundational theories and models that underpin Social Media Marketing (SMM) within the context of projects. This study centered its attention on three prominent models: Reich and Benbasat's Innovation Diffusion Theory (IDT) from 1996, Goodhue's Task-Technology Fit (TTF) proposed in 1995, and Alter's Work Systems Theory (WST) articulated in 2013. These theoretical frameworks, rooted in the realm of information systems, served as the conceptual underpinning for elucidating the adoption of social media tools within the sphere of project management.

2.2.1 Innovation Diffusion Theory

The model employed to delineate the potential determinants impacting the acceptance of novel technology as outlined by Khalil et al. (2010). According to Rogers (1996),

the acceptance of new technology is influenced by five distinct characteristics: compatibility, complexity, observability, trialability, and relative advantage. Relative advantage pertains to how the newly embraced innovation is perceived as significantly more beneficial than its predecessor. Organizations adopt novel technologies due to the competitive edge these innovations bestow, conferring an advantage over entities not utilizing the new technology. The diffusion theory holds relevance for organizations, offering insights into the rationale behind the adoption of technological innovations. This theory has played a pivotal role in elucidating the factors that contribute to both the rejection and adoption decisions pertaining to social media utilization. It has further facilitated the identification of attributes that distinguish early and late adopters or rejecters, thus yielding a more comprehensive perspective. Consequently, this theoretical framework equips researchers with valuable insights into the positive and negative perceptions surrounding social media platforms that shape the adoption trajectory. It also enables a comprehensive comprehension of both individual and organizational innovation processes.

2.2.2 Task-Technology Fit

The theory delineates how technology serves to facilitate the execution of designated tasks (Goodhue, 1995). It posits that if the functionalities of the technology align with the task's requirements, the likelihood of its adoption increases (Goodhue, 1995). This underscores the notion that the technology's usage must yield a positive impact on user performance; furthermore, effective utilization hinges on the compatibility between the task at hand and the technology supporting it (Goodhue, 1995), as depicted in Figure 2.1 below. The task-technology theory and (system) utilization hold relevance in prognosticating user-job performance and efficacy in employing a specific system under examination. Thus, this research systematically scrutinized pertinent literature

through the lens of the task-technology fit theory to elucidate the existing understanding of social media utilization in project marketing and to pinpoint areas warranting further investigation.

Figure 2.1   Task-Technology Fit Theory
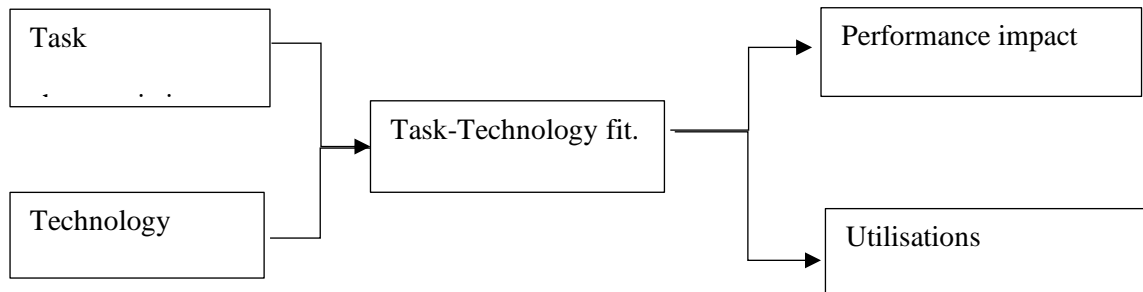
Source: Good and Thompson (1995)

2.2.3 Work System Theory

The theory consists of three core components: framework, lifecycle, and system. Within this framework, participants employ technology, information, and other resources to execute tasks, yielding outputs for clients (Alter, 2013). The framework provides a static view, while the lifecycle model offers a dynamic perspective, illustrating system changes over time due to planned and unforeseen alteration requests (Alter, 2013). Illustrations of work systems encompass information systems that process data through their operations and activities, as well as projects that materialize to produce distinct products/services and subsequently conclude. Other instances encompass service systems, supply chain systems, and e-commerce websites. The applicability of WST lies in its capacity to elucidate the harmonious integration of factors contributing to value creation within a specific work system, notably in the context of a project, aimed at fostering sustainability and sustained performance. The theory underscores the necessity for project managers to exhibit adaptive and proactive behaviors, ensuring the system's performance (i.e., the project). This implies that interactions and components

should be closely aligned with the work system's objectives. Interactions among components, performance discrepancies, misalignments, and the overall functioning of the system stand as fundamental rationales for adjusting a work system. In this study, social media platforms within KoTDA were examined to ascertain the alignment between their usage and the work system goals, ultimately contributing to project success.

2.3   Empirical Review

Social media tools have been used for sharing and distributing information by various states and local governments as well as individuals (Abella et al., 2017). Project contributor and experts can leverage on the social media advantages and benefits for knowledge management and broad information exchanges. Strategic social media management enables efficient sharing of information as well as management of knowledge ion established and well-defined channels. By encouraging collaboration and participation, efficient and cost-effective way of accessing knowledge and channels of communication improves the productivity and synergy of team members of a project (Hysa & Spalek, 2019). In respect to this, social media is a crucial tool that can be used to manage resources externally and contribute to towards building a good collaborative network with all project team members, stakeholders, and project beneficiaries (Johnson, 2021).

Social media tools have further been used by various governments to collaboratively make policies through active engagements and participation of all policy makers across the globe without limitation of distance (Bernink et al., 2017). For example, the Australian government has incorporated social media to deliver service offerings, in areas like medicate online claims as well as retirement benefits payments and pension refunds (Omar et al., 2013). In Sweden, universities in six municipalities have and

open-web based platform where parents and teachers can track the progress and performance of the students (Feller et al., 2011).

Furthermore, social media tools have been instrumental in providing individuals with disabilities in Northern Cyprus with timely updates regarding tourism and educational scholarship opportunities (Kanagarajoo et al., 2020). According to Barnes (2014), a notable 73 percent of the top 500 companies maintained active Twitter accounts, and 66 percent of these entities operated Facebook pages, indicating the swift uptake of social media within the private sector. In a study encompassing organizations in Australia, Malaysia, and South Korea, Parveen et al. (2015) discovered that numerous company websites prominently featured and emphasized their presence on social media platforms. This strategic utilization of social media was observed to enhance customer experiences, thereby fostering brand visibility, raising awareness about the company's products and services, and even reducing advertising costs (Kapoor et al., 2018). Collaborative technology tools exhibit attributes such as synchronicity and availability, electronic facilitation, and electronic memory (Raghupathi & Raghupathi, 2014).

A study by Mathur et al. (2021) conducted in India evaluated the advantages of local government utilization of social media in megaprojects. The utilization of social media in such projects was found to be beneficial in terms of publishing progress reports, achieving cost savings through crowdsourcing, promoting project benefits, and fostering community engagement. Comparable benefits emerged from a case study conducted in China, demonstrating how social media enhanced accountability (Weninger & Huemann, 2015). Remidez and Jones (2012) underscored the essential role of social media in project communication. Their study showcased how social media served to unite project team members across interconnected projects. They also emphasized the need for more comprehensive guidelines to aid project managers in

effectively implementing and utilizing social media tools within project management to enhance project outcomes. This research suggests that these tools are indeed being used in test-case environments.

Troukens (2012) classified social media tools into ten distinct categories, as illustrated in Table 2.1. These categories, encompassing sharing, microblogging, social networks, content management, advice, planning tools, discussion platforms, event organizers, live casting, and crowdsourcing, offer pivotal utility within the context of project management. While building upon Troukens's (2012) investigation, this study also delved into the tools employed at various project stages and identified pertinent social media usage issues.

Table 2.1   Related Tools and Social Media Categories

Category	Tools
Microblogging	Wikis, Tumblr, Twitter
Content management,	WordPress and Joomla.
Share	Flickr, YouTube, and Instagram
Social networks	Facebook, Yammer, LinkedIn, and Myspace.
Discuss	Google Talk, Ms teams, MS Office Communicator, and Skype
Planning tools	ZOHO Projects, Procore, Huddle, Ms project and Basecamp,
Event organiser	Meetup and Eventbrite
Live casting	Justin.tv, Twitter space Upstream.tv, Facebook live and Qi
Advice	Yelp! and TripAdvisor
Crowdsourcing	Top coder, Crowd Spring, Test and Incentive

2.4   Summary of Empirical Review

Researchers have attempted to establish the correlation between SMM and metrics of project performance. Although scholars have come closer to providing information on the correlation between the two variables, there are still gaps to be bridged. Table 2.2 below summarises the empirical review, outlining the knowledge gaps and the current focus study area.

Table 2. 2   Summary of Empirical Review

Author(s)	Study Topic	Objectives	Methodology	Findings	Knowledge Gap(s)	The focus of the Current Study
Hysa and Spalek (2019)	Advantages and Challenges of Integrating Social Media in Project Management	Explore potential applications of social media in project management: prospects and challenges.	Diagnostic survey and questionnaire plus additional metanalysis	Reliance on social media use in the way project teams work (supporting project management team's communiqué, knowledge management, cooperation, engagement, work productivity, promotion) is significant	how opportunities and threats impact the utilization of social media tools in the context of project management.	Uncover the significance of social media tools within project management.
Kangaroo, Fulford, and Standing, (2020)	The role of social media in project management	Identify the predominant social media platforms used for activities in project management.	The Delphi study delved into the intricacies of "why and how" social media is employed in projects, employing a methodology involving two rounds of questionnaires followed by confirmatory interviews.	The sharing of information through social media tools varies across different stages of the project lifecycle and brings significant benefits to project management by facilitating streamlined communication.	Integration of social media into project management	Examine previous research on social media within the context of project management, focusing on the types of tools employed and their respective modes of utilization.
Parveen and Ainin (2015)	Exploring the Relationship Between Social Media and Organizational Performance Metrics: A Study of Malaysian Social Media Managers	Examine the utilization and influence of social media on organizational performance.	Employed a qualitative approach to investigate the utilization of social media within organizations.	Social media diminishes specific cost areas while improving accessibility to information.	This analysis does not delineate the potential correlations between these findings and their applicability to project management as a comprehensive discipline. Additionally, it fails to highlight why these insights might diverge or be pertinent within the context of organizational performance assessment.	Improve understanding of integrating social media into project management.

Ngai, Tao and Moon (2015)	Exploration of Social Media: Ideas, Constructs, Theories	In order to grasp how ideas, elements, and theories have been integrated into research centered on the utilization of social media, it becomes essential to delve into the examination of theoretical frameworks.	Systematic and structured meta-analysis	The causal relationship between the causes and effects of the adoption and usage of social media.	Does not offer a conclusive position on research concepts and constructs on use of social media tools for project management.	Assess social media tools' usefulness in the project management context
Bashir, Papamichail, and Malik (2017)	Influence of Social Media Applications on Product Development Processes	To investigate the impact of social media applications on the product development processes within multinational corporations.	A qualitative research design	Social media determines customers' tests and preferences as well as helps understand market trends, competitors' activities and product feedback	Limits on multinational corporations (MNC) vary with small and medium-scale enterprises	Facilitate knowledge management and information exchange among project experts and stakeholders working on established mechanisms
Bennett, et al. (2008)	In-depth analysis of digital natives	To establish the application of social media within the realms of education and sociology.	Systematic and structured meta-analysis	It is given that at any point in time, there is always an appearance 'significant changes	It does not pin down a position but states that there are no static positions considering positions shift with the times or era it is in.	Identify perceived novelty strategies and contributions social media portends for marketing Konza Technopolis.
Bolton et al. (2013)	Social Media Adoption Among Generation Y	Exploring the Utilization of Social Media by Generation Y	Discerning systematic disparities relating generation Y and other cohorts (as correlates or not to maturational or other dissimilarities), for example, preferences, behaviour and values over time.	Generation Y is growing rapidly and is quite large. They use social media in diverse ways at different stages of life and as their behavior changes. While several studies have explored social media use in Generation Y, there's a lack of comprehensive research that examines how social media usage, its consequences, and driving factors vary among different age groups within this generation.	It fits a specific generation, with no comparisons to other generations or the whole body of project management	Influence government policies on projects and their management, and proffer alternatives to present direction

2.5   Conceptual Framework

The study employed the framework depicted in Figure 2.2 below. The independent variables encompassed social media tools drawn from the framework presented by Troukens (2012), which included microblogging, social networks, blogging, sharing, discussing, planning tools, events, advice, and career-related platforms. The central focus of the study was to comprehend the efficacy of using social media tools within the context of KoTDA. The research aimed to delineate the tangible social media tools utilized in project management and their influence on project dynamics, ultimately contributing to enhanced project visibility. The dependent variable of the study was visibility, gauged by the project team's capacity to effectively promote the project, thereby fostering greater adoption by stakeholders and subsequently translating to increased project engagement.

Figure 2.2   Conceptual Framework

Independent variable   Dependent variable

Social media tools	Visibility
• Microblogging	
• Social networks	
• Blogging	
• Share	
• Discuss	
• Planning tools	
• Events	
• Advice	
• Career	
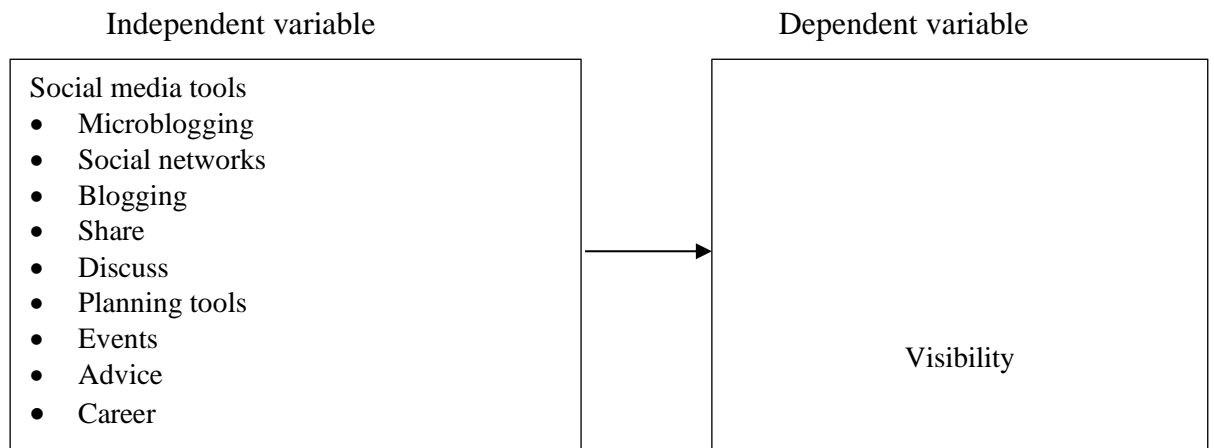
CHAPTER THREE: RESEARCH METHODOLOGY

3.1   Introduction

In the third chapter, the methodological facets adopted to comprehend the impact of social media tools on enhancing project performance within the project management team at KoTDA were addressed. The chapter delved into the research plan, the approach to sampling, the techniques employed for data collection, and the methodology chosen for data analysis.

3.2   Research Design

A descriptive research design was chosen for this study due to its cost-effectiveness and its capacity to gather comprehensive information from the target population. This design was particularly well-suited as it facilitated the generalization of findings to the broader population. By adopting this approach, the researcher was able to engage a larger number of respondents and thoroughly examine the variables and their interrelationships. Data collection encompassed both primary and secondary sources. Primary data was gathered through administered questionnaires to respondents, while secondary data was extracted from social media reports.

3.3   Population of the study

The focus of this research was KoTDA, an entity comprising 11 distinct departments, namely, physical planning and compliance, construction, operations and management, ICT smart city solutions, business development and innovation, corporate research, policy, and strategy, corporate secretary and legal services, corporate services, project management, supply chain, and security and emergency services, as well as internal audit and assurance. Specifically, the study directed its attention towards the project management and business development and innovation departments. The latter encompassed roles such as investor facilitation and one-stop shop, marketing and

communication, trade and investment, and knowledge economy and innovation. The project management department consisted of 15 team members, while the business development department consisted of 30 members. Additionally, an external agency was contracted to oversee project advertising and marketing on behalf of the authority. Inclusively, five individuals from this agency, responsible for managing KoTDA's social media accounts, were incorporated into the research's target population. The participants were invited to partake in the study via email.

3.4   Sample Size and Sampling Procedure

A sample of 45 employees from KoTDA and an additional five employees from an agency were included in the study. The research employed stratified sampling to identify the specific employees who took part in the study. This approach is non-probability sampling and was chosen to ensure balanced representation from each defined subgroup within the results. Furthermore, for the selection of agency employees, the researcher utilized purposive sampling as a method under the probability sampling framework.

3.5   Operationalization of Study Variables

The social media tools were the independent variables, which included microblogging, social networks, blogging, share, discuss planning tools, events, advice, and career. The variable under examination was visibility, and the operationalization of the study variables is presented in Table 3.1 as depicted below.

Table 3.1   Operationalization of Variables

Variables	Operational Definition	Type of Scale
	Microblogging	Ratio
	Social networks	Ratio
	Blogging	Ratio
Social media tools	Share	Ratio
	Discuss	Interval
	Planning tools	Ratio
	Events,	Ratio

	Advice	Interval
	Career	Interval
Visibility	Number of investors attracted by the project	Ratio

3.6 Data Collection

The data collection process incorporated both primary and secondary sources. Primary data was gathered through questionnaires and interviews. The questionnaires employed a combination of open-ended and close-ended questions to ensure the collection of both quantitative and qualitative data. Structured into four sections, the questionnaire corresponded to the study's defined objectives.

Section A elicited details about the respondents' characteristics, encompassing geographical location, educational background, and sources of income. Section B aligned with the initial study objective, aiming to evaluate the usage of social media tools in project management. This segment sought insights into the prevalence of social media tools within projects through responses provided by participants.

Section C was designed in accordance with the second objective, focused on establishing the significance of social media tools in project management. It gathered data on the specific tools utilized within KoTDA and their contributions to enhancing project visibility. The third objective, centered on identifying effective social media strategies for marketing Konza Technopolis, was addressed by Section D. This part gathered information on strategies that have proven successful thus far, along with recommendations for potential strategies to be employed.

Section E delved into the correlation between social media tools and project visibility. Respondents expressed their viewpoints on how these tools could influence project visibility. During the administration of questionnaires, the researcher also noted the social media tools employed by the participants. Ample time was granted to respondents for providing their insights, as questionnaires were collected two weeks

after issuance. Additionally, the researcher supplemented primary data with information gleaned from monthly marketing reports, constituting the secondary data component.

3.7   Research Instruments Reliability

The research aimed to ensure content validity by designing research instruments that effectively covered the research objectives. To confirm this, an expert in the field of Social Media Marketing (SMM) assessed the research instruments. Furthermore, the researcher established reliability by assessing the internal consistency of the research instrument.

Structured questionnaires were employed as the data gathering method for this study. This choice was made on the assumption that respondents possessed the necessary literacy to answer the questions adequately. Additionally, the structured questionnaire's capacity to swiftly capture comprehensive information rendered it the most appropriate tool, as recommended by Kothari (2004). This approach ensured uniformity and maintained the confidentiality of sources, as outlined by Creswell (2014).

A series of tests were conducted to validate the questionnaire's integrity. The primary objective was to identify and rectify any potential omissions, flaws, or errors within the questionnaire prior to commencing data collection for analysis, as highlighted by Mugenda and Mugenda (2003). A pilot study was conducted using 10 percent of the overall sample within Konza Technopolis in Malili, specifically targeting the marketing department. Following the initial administration, the instruments were administered to the same respondents once again after a week, in line with Ngechu's (2004) approach. It's noteworthy that the feedback obtained during this process was not included in the subsequent data collection.

27

To assess the internal consistency of the measurements, Cronbach's alpha reliability test was employed, which examines the reliability of scales. A higher coefficient value closer to one indicates stronger internal consistency for the study item, while a lower value closer to zero signifies weaker internal consistency. A pretest of the tools was conducted with appropriate respondents to assess any potential issues faced by research participants. The reliability measurement was evaluated using Cronbach's alpha. Recommendations suggest that research instruments should have a reliability score of approximately 0.70 or higher. For this study, a cutoff point of 0.7 was employed, with values below this indicating weak internal consistency.

3.8   Data Analysis

The research utilized both qualitative and quantitative data analysis methodologies. Descriptive statistics, including measures like mean, frequency distribution tables, and standard deviation, were employed to analyze the data pertinent to the first and second objectives. These objectives aimed to assess the utilization of social media tools within KoTDA and ascertain the significance of social media platforms in project management. To address the third objective, which centered on identifying social media strategies for marketing Konza Technopolis, linear regression analysis was applied.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1   Introduction

The research endeavored to explore the application of social media tools for promoting Konza Technopolis, particularly focusing on their role in fostering stakeholder engagement within smart cities. Chapter One offers an overview of the research objectives and its contextual backdrop. The core objective is to investigate the effectiveness of diverse social media tools in the context of Kenyan marketing, aiming to enhance the understanding of how these tools can be seamlessly integrated into project management practices. Moreover, the study aspires to introduce fresh perspectives and innovative approaches to marketing smart cities, with the aim of accelerating adoption beyond the prevailing norms within Africa.

Within this chapter, the data derived from questionnaires and insights from interviews are meticulously presented and analyzed. The online distribution of the questionnaire (refer to Appendix II) targeted KoTDA employees. Comprising 20 questions, the survey questionnaire was meticulously designed to glean insights into the utilization of social media as a marketing instrument at KoTDA. The collected data underwent analysis employing descriptive statistics, and the findings are organized in tables. This presentation method aims to delve into how social media can be effectively employed as a potent marketing tool within the specific context of KoTDA. Prior to participating, each respondent was thoroughly informed about the study's purpose, significance, and objectives. Their privacy and confidentiality were assured, with their responses earmarked solely for academic pursuits.

4.2 Response Rate

The study received a total of forty-five completed questionnaires, achieving a response rate of 100 percent, as detailed in Table 4.1 below. This high response rate is deemed commendable based on Smith's (2015) perspective, which suggests that a response rate surpassing 60 percent is deemed acceptable for a survey. The successful attainment of this elevated questionnaire return rate was facilitated by distributing the questionnaires to respondents and requesting their completion within a brief time frame. The notable return rate not only ensured a representative sample but also minimized the potential for non-response bias.

Table 4.1   Response Rate

	Frequency	Percent
Completed Questionnaires	45	100
Unanswered questionnaires	0	0
Total	45	100

4.3 Pilot Test Results

The data collection tool used in the primary survey underwent pretesting to ensure reliability and validity. Reliability was assessed using Cronbach's alpha coefficient, with a threshold of 0.7 considered acceptable. Additionally, expert opinions were sought to evaluate the tool's validity. The results of the reliability test, summarized in Table 4.2 below, included the Cronbach alpha value, the number of items, and the rules and decisions for each variable. The study's findings indicated that all variables surpassed the recommended threshold of 0.7 for Cronbach's alpha, as suggested by Rix, Wilson, Sheehan, and Tujague (2019), confirming the questionnaire's reliability. The questionnaire was thoroughly examined for typographical and grammatical errors, and improvements were made based on supervisor feedback to ensure content validity. The content validity assessment addressed errors, ambiguity, and clarity.

Table 4. 2   Reliability Test Results

Variable	Cronbach Alpha	Number of Items	Rule	Decision
Social media sites	0.765	5	> than 0.7	Reliable
Blogging	0.745	5	> than 0.7	Reliable

Events planning	0.814	5	> than 0.7	Reliable

4.4 Demographics of the Respondents

A questionnaire was employed as the primary data collection method in the study to gather information from a diverse target population. The sample size consisted of 45 respondents, strategically drawn from various categories including gender, age, highest level of education, represented college/school/institute/department, and respondent category. The distribution of respondents across these categories is summarized in the following Table 4.3.

As presented in Table 4.3, among the total 100 respondents, 62.5 percent were identified as male, while 37.5 percent were female. A majority of the participants (70 percent) fell within the age range of 26 to 35 years, implying that the sample was largely composed of young professionals. Only a smaller portion of respondents (12 percent) fell between the ages of 36 and 45 years, with an even lower percentage (10 percent) falling between 45 and 55 years. The age group of 56 to 65 years constituted only 5 percent of the sample, and the youngest age group, 25 years and below, accounted for a mere 2.5 percent. This distribution of age and gender provides valuable insights into the varying perspectives and attitudes of diverse demographic groups concerning the use of social media within KoTDA.

Additionally, the study delved into respondents' work experience in project management, their tenure within KoTDA, and their specific organizational roles. These findings are succinctly presented in Table 4.3 below. The table demonstrates that a significant proportion of participants (55 percent) possessed work experience of one to five years in project management. Furthermore, 25 percent reported having six to ten years of experience, while 20 percent had accumulated over ten years of experience.

These results point to a notable portion of respondents possessing a firm grasp of project management practices, rendering them well-equipped to comprehend the issues explored within the study.

Table 4. 3   Summary of Social-Demographics of the Respondents

Variable	Socio-Demographics	Frequency	Percent
Gender	Female	15	37.5
	Male	25	62.5
Age	25 and below	1	2.5
	26-35	28	70.0
	36-45	5	12.5
	46-55	4	10.0
	56-65	2	5.0
Experience in project management, implementation, and delivery (years)	Below one	0	0.0
	1-5	22	55.0
	6-10	10	25.0
	Over 10	8	20.0
Experience in Konza Technopolis Authority (years)	Below 1	7	17.5
	1-5	28	60.0
	6-10	10	22.5
	Over 10	0	0.0
Role in Konza Technopolis	Project manager	20	50.0
	Programme supervision	6	12.5
	Project team	11	22.5
	Change management	3	5.0
	Communication management	5	10.0
Experience in social media sites usage(years)	Never	0	0.0
	Less than one	3	5.0
	1-5	22	50.0
	6-10	15	35.0
	Over 10	5	10.0

Furthermore, a significant proportion of the participants, accounting for 60 percent, had amassed work experience spanning one to five years within KoTDA. Another 22.5 percent reported having worked for a duration of six to ten years. This data indicates that a considerable number of respondents possessed substantial experience within KoTDA's operations, rendering them well-versed in the project management intricacies under scrutiny.

Moreover, the data reveals that most respondents (72.5 percent) were employed in project/programme management roles, signifying their direct involvement in managing projects and programmes. Additionally, 22.5 percent of the respondents held positions in programme supervision, indicating their oversight of project implementation. A smaller percentage of participants (10 percent) were engaged in communication management, highlighting the significance of effective communication in project management. Finally, 5 percent of the respondents were involved in change management, underscoring the role of change management in project implementation.

4.5   Descriptive Analysis of Study Variables

The study used a Likert scale with ratings ranging from 0 (Never) to 3 (High) to assess the study objectives. These objectives encompassed the evaluation of social media tool utilization in project management, determination of the significance of social media tools in project management, and identification of social media strategies for marketing Konza Technopolis. This section presents a summary of the Likert scale questions using percentages, mean values, and standard deviations.

4.5.1 Use of Social Media Tools in Project Management

The initial objective of the study was to explore the application of social media tools in project management within the KoTDA framework. The collected responses were subjected to analysis for mean and standard deviation values, as illustrated in Table 4.4 below. The data highlights that none of the respondents had prior experience using social media, while a minor portion (5 percent) had engaged with it for less than a year. A significant proportion (50 percent) reported usage spanning from 1 to 5 years, and 35 percent indicated usage experiences ranging from 6 to 10 years. A mere ten respondents reported using social media for over ten years. These findings underscore that a notable number of respondents possessed a certain degree of familiarity with social media,

primarily utilizing it for 1 to 5 years. This level of familiarity may have influenced their perceptions and attitudes toward the implementation of social media within the KoTDA context.

The usage frequency of social media tools in project management is also presented in Table 4.4 below. The table displays the percentage of respondents reporting their usage frequency as never, low, medium, or high. The mean and standard deviation values are also provided for each social media tool.

Table 4. 4   Social Media Tools Usage in Project Management (Percent)

Social Media Tool	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	15.0	20.0	22.5	42.5	1.93	1.118
LinkedIn	12.5	7.5	40.0	40.0	2.08	0.997
Twitter	7.5	20.0	27.5	45.0	2.10	0.982
Instant messaging	2.5	2.5	27.5	67.5	2.60	0.672
Blogging	40.0	37.5	12.5	10.0	0.93	0.971
Wiki	32.5	55.0	10.0	2.5	0.82	0.712
Podcast	70.0	22.5	7.5	0.0	0.38	0.628
Video podcast	45.0	42.5	12.5	0.0	0.67	0.694

Among the array of social media tools investigated, Facebook emerged as notably prevalent in project management, with 42.5 percent of respondents indicating significant usage. The average usage frequency for Facebook stood at 1.93, signifying a moderate level of usage on average. The moderate standard deviation of 1.118 indicates a reasonable degree of variance in the responses.

Following Facebook, LinkedIn garnered attention as the second most commonly employed social media tool, with 40 percent of respondents reporting a moderate level of usage. The mean usage frequency for LinkedIn was 2.08, depicting a blend of medium to high usage on average. The standard deviation of 0.997 points to a moderate level of variability in the responses.

For Twitter, findings indicated a moderate level of usage, with 27.5 percent of respondents reporting a moderate level of usage and 45 percent indicating high usage.

The average usage frequency for Twitter was 2.10, signifying a medium to high level of usage on average. The standard deviation of 0.982 implies a moderate degree of variance in the responses.

Instant messaging tools, typified by WhatsApp, were extensively employed in project management, as reported by 67.5 percent of respondents indicating high usage. The mean usage frequency for instant messaging reached 2.60, reflecting a notably high level of usage on average. With a standard deviation of 0.672, responses showed relatively limited variability, indicating a higher level of consensus among respondents regarding the usage of instant messaging.

Blogging was reportedly used with low frequency, as only 10 percent of respondents indicated high usage. The mean usage frequency for blogging was 0.93, indicating a low level of usage on average. The standard deviation of 0.971 suggests moderate variability in the responses. Wiki exhibited moderate usage, with 55 percent of respondents reporting medium usage. The mean usage frequency for Wiki was 0.82, indicating an average low to medium usage level. The standard deviation of 0.712 suggests moderate variability in the responses.

Podcasts and video podcasts were project management's least utilized social media tools. 70 percent of respondents reported never using podcasts, while 45 percent reported never using video podcasts. The mean usage frequency for podcasts was 0.38, indicating a deficient usage level on average. The mean usage frequency for video podcasts was 0.67, indicating a low level of usage on average. The standard deviations for both podcasts and video podcasts were 0.628 and 0.694, respectively, suggesting a relatively low variability in the responses for these tools.

Table 4.5 provided below presents the outcomes concerning the utilization of distinct social media tools within KoTDA. This table encompasses the percentages of respondents indicating their usage extent for each specific tool, alongside the corresponding mean and standard deviation values representing the usage trends. The findings divulge that instant messaging platforms, such as WhatsApp, stood out as the most prevalent social media tool, with a notable 72.5 percent of respondents highlighting extensive usage. This underscores the substantial reliance of a majority of KoTDA respondents on instant messaging for effective project management. The calculated mean usage value for instant messaging reached 2.70, signifying a notably high average usage level. With a standard deviation of 0.516, the variation in responses is relatively limited, implying a heightened degree of consensus among respondents regarding instant messaging's usage. Facebook emerged as the subsequent favored tool, as 42.5 percent of respondents indicated significant usage, emphasizing the notable role of Facebook in project management activities among KoTDA personnel..

Table 4. 5   Social Media Tools Usage in Konza Technopolis Development Authority (Precent)

Social Media Tools Usage	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	10.0	17.5	30.0	42.5	2.05	1.011
LinkedIn	2.5	12.5	52.5	32.5	2.15	0.736
Twitter	5.0	25.0	22.5	47.5	2.12	0.966
Instant messaging	0.0	2.5	25.0	72.5	2.70	0.516
Blogging	27.5	50.0	7.5	15.0	1.10	0.982
Wiki	22.5	67.5	5.0	5.0	0.93	0.694
Podcast	62.5	27.5	7.5	2.5	0.50	0.751
Video Podcast	42.5	45.0	10.0	2.5	0.72	0.751

The mean usage value for Facebook was 2.05, suggesting a medium to high usage on average. The standard deviation of 1.011 indicates moderate variability in the responses, suggesting diversity in the usage levels among the respondents. LinkedIn and Twitter had similar usage levels, with approximately a third of respondents

indicating high usage for each tool. This implies that many respondents in KoTDA utilise LinkedIn and Twitter for their project management activities. The mean usage value for LinkedIn was 2.15, while for Twitter, it was 2.12, indicating a medium to high level of usage on average for both tools. The standard deviations of 0.736 and 0.966 for LinkedIn and Twitter suggest moderate response variability. Blogging and wiki tools were less popular among the respondents, with only a minority indicating high usage. This suggests that a smaller proportion of KoTDA respondents utilise these project management tools.

The average usage level for blogging yielded a mean value of 1.10, signifying a low extent of usage on average. A standard deviation of 0.982 indicates a moderate level of variability within the responses. Regarding Wiki usage, the mean value was 0.93, indicating an average level of usage ranging from low to medium. Similarly, the standard deviation of 0.694 suggests a moderate degree of variability in the Wiki-related responses. Among the array of social media tools investigated, podcasts and video podcasts demonstrated the least utilization.

In relation to these tools, the majority of respondents indicated infrequent or no usage, implying sporadic utilization of podcasts and video podcasts within KoTDA's project management efforts. The mean usage value for podcasts was calculated as 0.50, highlighting a notably limited usage level on average. The mean usage value for video podcasts was slightly higher at 0.72, indicating a low average usage level. Furthermore, the standard deviations of 0.751 for both podcasts and video podcasts point toward relatively limited variability in the responses related to these particular tools.

Other tools in project management task/area tools mentioned by the survey respondents for project management and related tasks included Zoho. This platform provides various tools for business operations, including email and project management. It

37

allows teams to collaborate on projects, track progress, and communicate through a centralised system. Skype was also mentioned and is a communication tool that allows users to make voice and video calls, send instant messages, and share files. It can be helpful for information sharing and teamwork. Others included Instagram, a social media platform for sharing photos and videos. While not typically considered a project management tool, it can be used for marketing and content creation. In addition, Teams, Skype, Google Chat, Google Meet, and Zoom were mentioned, and these are all communication and video conferencing tools commonly used in business settings. They allow teams to connect and collaborate remotely, making them useful for project management. Lastly, Hootsuite - a platform used for managing social media content across multiple channels was mentioned, and it can be helpful for businesses looking to streamline their social media marketing efforts.

4.5.2 Importance of Social Media Tools in Project Management

The secondary objective was centered around assessing the significance of social media tools in project management. This evaluation was conducted by analyzing two tables (Table 4.6 and Table 4.7 below). Table 4.6 offers a comprehensive view of personal social media usage, presenting respondent percentages indicating their frequency of usage, as well as mean and standard deviation values for each tool.

Analysis of the findings presented in Table 4.6 unveiled Facebook as the most prevalent social media tool utilized for personal purposes. A significant majority of respondents (80 percent) reported a high frequency of use, while only a small fraction indicated medium or low usage. The mean usage score for Facebook was calculated as 2.60, accompanied by a standard deviation of 0.900, denoting a relatively consistent pattern in responses. LinkedIn also emerged as a widely adopted platform among respondents, although its usage level was slightly lower compared to Facebook. Around 45 percent

of respondents reported high usage, with 47.5 percent indicating medium usage. The mean usage score for LinkedIn was computed as 2.32, accompanied by a standard deviation of 0.764, indicating a moderate degree of variability in responses.

Similar to LinkedIn, Twitter showcased prevalent usage for personal purposes. A majority of respondents (55 percent) indicated high usage, while 25 percent reported medium usage. The mean usage score for Twitter stood at 2.32, with a standard deviation of 0.859, suggesting a moderate level of diversity in responses. In contrast, instant messaging platforms (e.g., WhatsApp) and blogging exhibited lower frequency of use in comparison to Facebook, LinkedIn, and Twitter. A mere 2.5 percent of respondents reported high frequency usage for instant messaging and blogging. The mean usage score for this category was 2.97, accompanied by a relatively low standard deviation of 0.158, signifying strong consensus among respondents regarding the infrequent use of these tools.

In contrast, podcasting and video podcasting emerged as the least utilized social media tools among respondents for personal purposes. Only 2.5 percent of respondents reported high usage for podcasts, and a mere 5 percent indicated high usage for video podcasts. The mean usage scores for podcasts and video podcasts were noted as 0.53 and 0.65, respectively, accompanied by standard deviations of 0.784 and 0.700. These values pointed towards significant variation in responses and an overall low frequency of utilization.

Table 4. 6   Social Media tools for Personal (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	7.5	5.0	7.5	80.0	2.60	0.900
LinkedIn	5.0	2.5	47.5	45.0	2.32	0.764
Twitter	2.5	17.5	25.0	55.0	2.32	0.859
Instant messaging	0.0	0.0	2.5	97.5	2.97	0.158
Blogging	35.0	35.0	20.0	10.0	1.05	0.986

Wiki	35.0	50.0	15.0	0.0	0.80	0.687
Podcast	62.5	25.0	10.0	2.5	0.53	0.784
Video Podcast	45.0	47.5	5.0	2.5	0.65	0.700

Table 4.7 presented below outlines the rationales behind the utilization of social media tools for work, as conveyed by the participants. The table exhibits the frequency and corresponding percentage of responses for each rationale, along with an overview of the overall significance of each rationale based on the participants' selections. Notably, the preeminent reason for employing social media tools for work is communication efficiency, as highlighted by 37 out of 40 participants (92.5 percent). The gathered data underscores the efficiency and effectiveness of social media tools as a means of communicating with colleagues and clients. Collaboration with fellow team members and the sharing of knowledge emerged as significant factors, chosen by 31 participants (77.5 percent) and 29 participants (72.5 percent) respectively.

The insights derived from the data underscore the pivotal role of collaboration and knowledge sharing within the work environment, simultaneously indicating that social media tools have the potential to facilitate these critical activities. Networking is also substantiated as a prevalent rationale, with 25 participants (60.0 percent) identifying it. This suggests that social media tools can function as mediums for expanding professional networks and forging connections within the industry. Conversely, the least cited rationale is cost-saving, which garnered selections from only 17 participants (42.5 percent). This implies that while social media tools might be perceived as economical, their adoption within the workplace is driven by a range of other motivations.

Table 4. 7   Reason for the Use of Social Media Tools to Work

Importance	Frequency	Percent

Communication efficiency	37	92.5
Team members collaboration	31	77.5
Clients' collaboration	22	55.0
Networking among stakeholders	25	60.0
Cost saving	17	42.5
Knowledge sharing	29	72.5

4.5.3 Social Media Strategies for Marketing Konza Technopolis

The third objective of this study sought to pinpoint effective social media strategies for marketing Konza Technopolis. Within this section, the evaluation of current strategies is undertaken, accompanied by recommendations for the integration of additional strategies. Moreover, the potential incorporation of social media across various programs and project management processes is underscored. The outcomes of this study are presented through tables numbered 4.8 to 4.19, offering a comprehensive overview.

Regarding the utilization of social media tools in administrative tasks, Table 4.8 (below) showcases the predominance of Facebook use, primarily at low to medium frequencies for administrative activities. Of the respondents, 40 percent indicated a high frequency of usage, while 25 percent reported low utilization. The mean usage score for Facebook stands at 1.10, displaying a standard deviation of 0.778, indicating a moderate level of response variability. In comparison, LinkedIn was also noted for administrative tasks, with 35 percent of participants indicating a high usage frequency. Medium usage was reported by 32.5 percent, while a mere 7.5 percent indicated low usage. The mean usage score for LinkedIn is 1.78, accompanied by a standard deviation of 0.920, signifying a moderate level of response divergence.

Twitter, as observed, is predominantly used at a medium frequency for administrative activities, with 40 percent of participants expressing high usage and none indicating low or high usage. The mean usage score for Twitter stands at 1.60, displaying a

41

relatively modest standard deviation of 0.496, highlighting a higher degree of consensus among respondents regarding the usage frequency. Notably, instant messaging platforms like WhatsApp are exclusively employed frequently for administrative tasks, with all respondents (100 percent) indicating high usage. The mean usage score for this category is 3.00, the highest among all tools, signifying unanimous concurrence regarding the frequent usage.

Blogging emerges as primarily used at a medium frequency for administrative tasks, with 72.5 percent of participants noting high usage and 27.5 percent indicating low usage. The mean usage score for blogging is 0.73, accompanied by a comparatively lower standard deviation of 0.452, underscoring a higher level of agreement among respondents concerning usage frequency.

The data underscore that wikis primarily experience medium-frequency utilization for administrative activities, with 52.5 percent of participants reporting high usage. In contrast, 22.5 percent indicated low usage, while 15 percent noted a high frequency. The mean usage score for wikis is 1.18, displaying a standard deviation of 0.958, indicating moderate variability in responses.

Both podcasts and video podcasts emerge as predominantly employed at a medium frequency for administrative tasks. A 50 percent usage frequency was reported by respondents for both categories. The mean usage scores for podcasts and video podcasts are 1.15 and 1.40, respectively. The standard deviations for both categories suggest a higher level of response variation (0.975 for podcasts and 1.081 for video podcasts).

Table 4. 8   Usage of Social Media Tools in Administrative Activities (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	25.0	40.0	35.0	0.0	1.10	0.778
LinkedIn	7.5	32.5	35.0	25.0	1.78	0.920
Twitter	0.0	40.0	60.0	0.0	1.60	0.496
Instant messaging	0	0.0	0.0	100.0	3.00	0.000
Blogging	27.5	72.5	0.0	0.0	0.73	0.452

Wiki	22.5	52.5	10.0	15.0	1.18	0.958
Podcast	25.0	50.0	10.0	15.0	1.15	0.975
Video Podcast	20.0	45.0	10.0	25.0	1.40	1.081

Displayed in Table 4.9 (below) is the utilization of social media tools within construction activities. The findings indicate that instant messaging tools, such as WhatsApp, are the most prevalent tools employed in construction activities, boasting a frequency of 37 (92.5 percent) and a mean score of 2.93. Following closely is LinkedIn, with a frequency of 12 (30 percent) in the high category and an associated mean of 1.53. Conversely, blogging stands as the least frequently used tool, with zero percent representation in the high category and a corresponding mean score of 0.75.

Table 4. 9   Usage of Social Media Tools in Construction Activities (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	17.5	57.5	20	5.0	1.13	0.757
LinkedIn	15.0	47.5	7.5	30.0	1.53	1.086
Twitter	12.5	57.5	30	0.0	1.17	0.636
Instant messaging	0	0	7.5	92.5	2.93	0.267
Blogging	37.5	50	12.5	0.0	0.75	0.670
Wiki	40.0	22.5	22.5	15.0	1.13	1.114
Podcast	35.0	42.5	22.5	0.0	.88	0.757
Video Podcast	27.5	15	22.5	35.0	1.65	1.231

Table 4.10 provided below presents the utilization of various social media tools within the context of software development. The data reveals that Twitter stands out as the most frequently employed social media tool in software development, with 50 percent of respondents utilizing it at a medium level. Similarly, LinkedIn holds a prominent position, with 35 percent of respondents reporting its usage. Facebook and instant messaging platforms (such as WhatsApp) are employed at a medium level by 37.5 percent and 10 percent of participants, respectively. Blogging, on the other hand, sees low-level usage by 45 percent of respondents. In contrast, Wiki, Podcasts, and Video

43

Podcasts register a medium level of utilization, reported by 37.5 percent, 22.5 percent, and 32.5 percent of respondents, respectively.

In Table 4.11, the following data outlines the application of social media tools in the design of plans within the construction industry. The table categorizes the usage frequency of different social media tools as never, low, medium, and high, alongside the corresponding percentages of respondents. Examining Facebook usage, the data indicates that 50 percent of respondents utilize it at a low level, 35 percent never use it, 15 percent employ it at a medium level, and none utilize it at a high level. The mean score for Facebook usage is 0.80, signifying minimal usage frequency within the construction industry. LinkedIn usage is reported at 25 percent of respondents for both low and medium levels, while 35 percent use it at a high level and 10 percent never use it. The mean score for LinkedIn usage is 1.60, suggesting a moderate level of usage in the design of plans.

Table 4. 10   Usage of Social Media Tools in Software Development (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	7.5	40.0	37.5	15.0	1.60	0.841
LinkedIn	0.0	37.5	27.5	35.0	1.97	0.862
Twitter	0.0	25.0	50.0	25.0	2.00	0.716
Instant messaging	7.5	0.0	10.0	82.5	2.67	0.829
Blogging	10.0	45.0	7.5	37.5	1.73	1.086
Wiki	20.0	25.0	17.5	37.5	1.73	1.176
Podcast	17.5	35.0	22.5	25.0	1.55	1.061
Video Podcast	17.5	25.0	32.5	25.0	1.65	1.051

Table 4. 11   Social Media Tools usage in Design of Plans (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	35.0	50.0	15.0	0.0	0.80	0.687
LinkedIn	25.0	25.0	15.0	35.0	1.60	1.215
Twitter	25.0	25.0	30.0	20.0	1.45	1.085
Instant messaging	7.5	5.0	10.0	77.5	2.57	0.903
Blogging	37.5	50.0	7.5	5.0	0.80	0.791
Wiki	35.0	17.5	32.5	15.0	1.28	1.109
Podcast	12.5	32.5	30.0	25.0	1.68	0.997
Video Podcast	12.5	30.0	30.0	27.5	1.72	1.012

Twitter usage is at 25 percent of respondents at the low level, 30 percent at the medium, and 20 percent at the high, and 25 percent of respondents do not use Twitter. The mean score of Twitter usage is 1.45, indicating that its usage is moderate in the design of plans. Instant messaging (for example, WhatsApp) usage is at 77.5 percent of respondents at a high level, 10 percent at medium, and 5 percent at each of the never. and low levels. The mean score of instant messaging usage is 2.57, indicating its usage in design plans is significant.

Blogging usage shows 50 percent of respondents at a low level, 37.5 percent at never, 7.5 percent at a medium, and 5 percent at a high level. The mean score of blogging usage is 0.80, indicating minimal usage in the design of plans in the construction industry. Wiki usage shows 35 percent of respondents at the low level, 32.5 percent at the medium, 15 percent at the high, and 17.5 percent at never. The mean score of wiki usage is 1.28, indicating that its usage is moderate in the design of plans.

The podcast usage shows 32.5 percent of respondents at each low and medium level, 25 percent at a high level, and 12.5 percent at never. The mean score of podcast usage is 1.68, indicating that the usage is moderate in the design of plans. The video podcast shows 30 percent of respondents at each low and medium level, 27.5 percent at high, and 12.5 percent at never. The mean score of video podcast usage is 1.72, indicating that its usage is moderate in the design of plans.

Table 4.12 (below) provides an overview of the utilization of social media tools within the context of equipment or system installation. The collected data demonstrates that Facebook and LinkedIn were the most utilized platforms, with 57.5 percent and 45 percent of respondents indicating a "low" level of usage, respectively. In contrast, fewer

respondents reported using Twitter and instant messaging tools like WhatsApp, with only 32.5 percent and 5 percent indicating a "high" usage level, respectively.

The columns denoting mean and standard deviation showcase the varying frequency and extent of usage among the different social media tools. Notably, WhatsApp exhibited a high mean usage frequency (2.73) alongside low variability (0.679), indicating extensive utilization among the majority of respondents. In contrast, blogging displayed a lower mean frequency (1.15) coupled with higher variability (0.949), signifying less frequent usage among a more diverse group of respondents.

Table 4. 12   Usage of Social Media Tools in Equipment or System Installation (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	22.5	57.5	10.0	10.0	1.08	0.859
LinkedIn	12.5	45.0	20.0	22.5	1.53	0.987
Twitter	12.5	32.5	25.0	30.0	1.73	1.037
Instant messaging	2.5	5.0	10.0	82.5	2.73	0.679
Blogging	22.5	55.0	7.5	15.0	1.15	0.949
Wiki	20.0	32.5	17.5	30.0	1.58	1.130
Podcast	27.5	25.0	22.5	25.0	1.45	1.154
Video Podcast	25.0	17.5	32.5	25.0	1.58	1.130

Table 4.13 (below) examines the utilization of social media tools within event or relocation activities. The table presents data regarding the frequency of tool usage, categorizing respondents into different usage levels, including "never." The outcomes unveil a fluctuation in social media tool usage contingent on the nature of the event or relocation activity. Some tools, for instance, Facebook and Twitter, are commonly harnessed, while others like LinkedIn exhibit variability in their utilization. Instant messaging platforms like WhatsApp emerge as extensively used, while the utilization of blogging, wikis, podcasts, and video podcasts is less prevalent. These results underscore the significance of contextual considerations when determining the suitable social media tools for a given activity.

Table 4. 13   Usage of Social Media Tools in Event or Relocation Activities (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	0.0	0.0	0.0	100.0	3.00	0.000
LinkedIn	0.0	15.0	17.5	67.5	2.53	0.751
Twitter	0.0	0.0	0.0	100.0	3.00	0.000
Instant messaging	0.0	7.5	10.0	82.5	2.75	0.588
Blogging	0.0	0.0	60.0	40.0	2.40	0.496
Wiki	15.0	40.0	30.0	15.0	1.45	0.932
Podcast	15.0	27.5	47.5	10.0	1.53	0.877
Video Podcast	10.0	22.5	22.5	45.0	2.03	1.050

The data in Table 4.14 below illustrates the utilization of social media tools in the context of maintaining process industries. The table provides an overview of the number of respondents who reported using various social media tools for their maintenance activities, categorized based on their usage levels: never, low, medium, and high. Additionally, the table includes the mean and standard deviation of the responses. It's evident from the table that Facebook, LinkedIn, Twitter, instant messaging (e.g., WhatsApp), blogging, wikis, podcasts, and video podcasts are the social media tools employed to maintain process industries. The predominant usage level for these tools falls within the medium category.

For Facebook, 42.5 percent of respondents indicated a medium usage level, while 15 percent reported high usage. The utilization of LinkedIn was noted as medium by 47.5 percent of respondents, with 20 percent reporting high usage. Among respondents, 35 percent reported a high usage level for Twitter. Instant messaging was predominantly employed at a high level, with 67.5 percent of respondents indicating such usage. Around 55 percent of respondents used blogging at a medium level. Wikis were employed at a medium level by 25 percent of respondents, while both podcasts and video podcasts were used at a medium level by 27.5 percent and 25 percent, respectively. The mean values of responses ranged from 1.35 to 2.52, with the highest mean corresponding to instant messaging and the lowest mean associated with

47

blogging. The standard deviations spanned from 0.716 to 1.132, suggesting that responses were distributed around the mean values.

Table 4.14   Social Media Tools usage in Process Maintenance of Industries (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	0.0	42.5	42.5	15.0	1.72	0.716
LinkedIn	7.5	25.0	47.5	20.0	1.80	0.853
Twitter	7.5	25.0	32.5	35.0	1.95	0.959
Instant messaging	7.5	0.0	25.0	67.5	2.52	0.847
Blogging	20.0	25.0	55.0	0.0	1.35	0.802
Wiki	22.5	27.5	25.0	25.0	1.53	1.109
Podcast	22.5	35.0	27.5	15.0	1.35	1.001
Video Podcast	25.0	25.0	25.0	25.0	1.50	1.132

In Table 4.15 provided below, the utilization of social media tools in the context of new product development is depicted. The table outlines the frequency of usage for distinct social media tools within companies engaged in new product development, categorized into four levels: never, low, medium, and high. Analysis of the data reveals that the most prominently utilized social media tool in new product development is Facebook, with a substantial 82.5 percent of companies reporting high usage. Following closely is LinkedIn, the second most employed tool, with 65 percent of companies indicating high usage. Additionally, Twitter and instant messaging also witness frequent usage, with 87.5 percent and 72.5 percent of respondents reporting high usage, respectively.

Conversely, Blogging, Wiki, Podcast, and Video Podcast are employed to a lesser extent in the realm of new product development. Blogging finds application in 57.5 percent of companies, spanning medium to high usage levels. For Wikis, 40 percent of companies utilize them at a medium to high level. On the other hand, Podcasts and Video Podcasts are employed by 25 percent and 50 percent of companies, respectively, at a low to medium level of usage. The calculated mean and standard deviation values for each social media tool offer insights into the average usage level and the variance

in responses, respectively. Mean values encompass a range from 1.83 to 2.88, indicating that social media tool usage in new product development generally lies between moderate and high levels. Contrastingly, standard deviation values range from 0.335 to 1.236, underscoring variations in reported usage levels within KoTDA.

Table 4. 15   Social Media Tools Usage in New Product Development (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	2.5	7.5	7.5	82.5	2.70	0.723
LinkedIn	0.0	0.0	35.0	65.0	2.65	0.483
Twitter	0.0	0.0	12.5	87.5	2.88	0.335
Instant messaging	5.0	0.0	22.5	72.5	2.62	0.740
Blogging	7.5	12.5	22.5	57.5	2.30	0.966
Wiki	22.5	12.5	25.0	40.0	1.83	1.196
Podcast	15.0	7.5	52.5	25.0	1.87	0.966
Video Podcast	20.0	20.0	10.0	50.0	1.90	1.236

Displayed in Table 4.16 below is an overview of social media tool usage in research activities. The table comprehensively presents the frequency and percentage of usage for various social media tools, along with their respective mean and standard deviation values. Notably, the table illuminates that instant messaging ranks as the most frequently employed social media tool for research activities, accounting for 82.5 percent of usage. Following this, Facebook and LinkedIn both stand at 47.5 percent, while Twitter matches this usage frequency of 47.5 percent. Conversely, blogging emerges as the least utilized social media tool for research activities, with a mere 12.5 percent of respondents reporting its usage.

Analyzing the mean and standard deviation values pertaining to social media tool usage in research activities, the highest mean score is observed for instant messaging at 2.65. Close behind are LinkedIn and Facebook, both with a mean score of 2.05, followed by Twitter at 2.20. In contrast, the lowest mean score is attributed to blogging, tallying at 1.55. Meanwhile, the standard deviation values underline considerable variation in the utilization of social media tools for research activities among respondents. Specifically,

these deviations are pronounced for Wiki (1.083), blogging (0.904), and Twitter (0.911).

Other tools provided by the respondents include the primary social media tools used for monitoring and evaluation, LinkedIn (H) and WhatsApp (H), indicating that these tools are used heavily in this context. In contrast, Instagram is used moderately in some contexts. Survey Monkey was indicated to be used as a social media tool for research and data collection.

Table 4. 16   Usage of Social Media Tools in Research Activities (Percent)

Social Media	Never	Low	Medium	High	Mean	Standard Deviation
Facebook	2.5	37.5	12.5	47.5	2.05	0.986
LinkedIn	2.5	37.5	12.5	47.5	2.05	0.986
Twitter	5.0	17.5	30.0	47.5	2.20	0.911
Instant messaging	2.5	12.5	2.5	82.5	2.65	0.802
Blogging	15.0	27.5	45.0	12.5	1.55	0.904
Wiki	12.5	12.5	20.0	55.0	2.18	1.083
Podcast	15.0	10.0	42.5	32.5	1.92	1.023
Video Podcast	10.0	17.5	37.5	35.0	1.97	0.974

Table 4.17 presented below provides an overview of the participants' perspectives concerning the influence of social media tools on project management. The respondents' viewpoints were assessed through a Likert scale encompassing five levels of agreement: strongly disagree (SD), disagree (D), neutral (N), agree (A), and strongly agree (SA). The table furnishes details concerning the frequency and percentage of responses for each factor, alongside the mean and standard deviation of these responses.

Table 4. 17   Importance of Social Media Tools in Project Management (Percent)

Importance	SD	D	N	A	SA	Mean	Standard Deviation
Utilizing social media tools provides distinct benefits in comparison to my current project management approach.	0.0	0.0	12.5	42.5	45.0	4.32	0.694
Leveraging social media tools has injected an element of enjoyment into project management.	0.0	10.0	0.0	55.0	35.0	4.15	0.864

Utilizing social media tools is more advantageous compared to employing alternative methods for project management.	0.0	12.5	52.5	30.0	5.0	3.27	0.751
I consider social media to be beneficial in my professional endeavours..	0.0	10.0	12.5	42.5	35.0	4.03	0.947
I can complete tasks more efficiently using social media tools.	0.0	0.0	22.5	42.5	35.0	4.13	0.757
Employing social media tools enhances my efficiency and effectiveness.	0.0	10.0	32.5	22.5	35.0	3.83	1.035
Social media tools play a crucial role in nurturing communities of best practice	0.0	10.0	12.5	52.5	25.0	3.92	0.888
Successful implementation of social media tools initiatives necessitates a cultural shift that fosters the adoption of new work methodologies.	0.0	0.0	0.0	85.0	15.0	4.15	0.362
Utilizing social media tools provides project managers and teams with a platform that fosters experiential learning, collaboration, and the exchange of knowledge.	0.0	10.0	0.0	55.0	35.0	4.15	0.864

Using a scale where SD represents strongly disagree, D signifies disagree, N indicates neutral, A denotes agree, and SA stands for strongly agree, the results indicate that social media tools play a constructive role in achieving job tasks. However, certain respondents expressed disagreement regarding the superiority of social media tools compared to other tools in project management. They also noted the necessity for a cultural shift to ensure the success of social media tool initiatives. Furthermore, respondents concurred that social media tools enhance their productivity and performance while serving as an excellent platform for cultivating communities of best practices. Additionally, they agreed that these tools expose project managers and teams to an environment fostering experience, collaboration, and knowledge exchange.

Social media holds the potential to enhance project management efficiency by enabling real-time updates on project advancement and facilitating the exchange of ideas and timely discussions. Moreover, it acts as a conduit for sharing information and immersing project teams in a realm of experience and knowledge sharing. The

expansive reach of social media allows for swift communication with a wide audience, simplifying conversations and information sharing across various aspects of project management.

Social media tools simplify team members' connections and the sharing of crucial information like deadlines and essential documents. Online information accessibility has grown, rendering project-related data readily available for sharing and retrieval. Lastly, these tools provide engagement reports, offering insights into team members' participation levels and interest in project-related discussions and activities.

Descriptive findings suggest that social media tools have profoundly influenced project teams' collaboration, communication, and leadership. The initial finding indicates that social media has streamlined remote work, eliminated outdated communication methods, and enhanced interaction, ultimately leading to cost savings. The subsequent finding suggests that social media has bolstered connections, boosting creativity and social consciousness within project teams. The third finding underscores the formalization and acceptance of social media as a communication medium, prompting shifts in team interaction and collaboration. Lastly, the final finding reveals that social media has promoted globalization and remote work opportunities, enabling teams to cooperate across diverse geographical locations.

These findings imply that social media tools have brought about cultural shifts in project management, resulting in enhanced collaboration, communication, and leadership. The incorporation of social media has heightened the efficiency and effectiveness of project teams, irrespective of their geographic dispersion. Respondents in the study noted several benefits of social media in project management. Immediate customer feedback stands out as one advantage. By leveraging social media, project teams can promptly gather input from customers and stakeholders, facilitating the swift

identification and resolution of project pain points. This iterative process contributes to project refinement. Another benefit lies in the global transformation of traditional project management. Social media has enabled teams to collaborate on a global scale, transcending physical barriers. This shift can potentially enhance project management efficiency, as teams gain access to worldwide information and expertise.

As respondents noted, social media tools also allow project teams to obtain information from peers quickly. This information can help teams optimize initiatives and suggest areas for improvement within projects. Real-time sharing of challenges and solutions among project team members is also possible, leading to quick identification and resolution of project problems. Finally, social media helps to break down the barrier of physical distance in project management. This allows team members to communicate and collaborate regardless of their physical location. This can increase efficiency as teams can work together seamlessly without being hindered by physical distance. Overall, social media has brought about various benefits in project management that enhance efficiency and effectiveness.

The benefits of utilizing social media tools in project management are illustrated in Table 4.18. Within the subsection focusing on financial benefits, none of the respondents provided affirmative responses. In fact, all 40 participants answered in the negative to the financial benefits questions, thereby indicating the absence of financial advantages stemming from the use of social media tools in project management.

Table 4. 18   Social Media tools Benefits in Konza Technopolis Development Authority

	No		Yes	
Benefits	Frequency	Percent	Frequency	Percent
Financial benefits				
Reduced expenses on meetings.	0	0	40	100
Ways to save on phone expenses.	0	0	40	100
Reduce recruitment expenses	0	0	40	100
No financial benefits realised	40	100	0	0

Efficacy benefits				
Improved collaboration	0	0	40	100
Improved team morale	0	0	40	100
Improved communication	0	0	40	100
No efficacy benefits realised	40	100	0	0

In the subsection pertaining to efficacy benefits, all 40 participants unequivocally acknowledged deriving efficacy benefits from their utilization of social media tools in project management. These observations suggest a collective agreement that fostering the adoption and incorporation of social media tools within project management can be substantiated by extending goodwill and leading the organizational drive. Achieving this can entail heightening awareness regarding the benefits of these tools, encouraging project managers to embrace them, providing training and policies to facilitate implementation, and designating dedicated personnel to manage the organizational social media presence.

The participants proposed several actions aimed at aligning the social media strategy with business priorities, challenges, and organizational culture. Recommendations included formulating and executing a strategy, bolstering capabilities, appointing champions, and ensuring a co-creation approach to strategy development to foster inclusivity. Furthermore, addressing engagement constraints among staff and organizations on social media platforms by establishing and enforcing appropriate restrictions was advised.

To synchronize the social media strategy with business priorities and culture, respondents recommended creating a list of elements that align with business priorities and culture. Subsequently, preparing a policy document to guide the strategy would ensure its congruence with the organization's overarching objectives and culture, thereby establishing lucid and attainable social media strategies.

The study's participants offered various suggestions for bolstering the adoption and use of social media tools in project management through education and training. They suggested organizing interactive training sessions facilitated by experts who could guide the team in tool usage and selection. Additionally, advocating for the benefits of utilizing social media tools and highlighting the necessity for change were deemed essential. Emphasizing knowledge sharing and team discussions to foster universal engagement in using these tools was underscored. Finally, they recommended post-training follow-up to ensure the effective utilization of social media tools. Overall, the participants underscored the continuous importance of training and education in effectively embracing and utilizing social media tools in project management.

To address problem areas and harness the potential of social media tools in project management, respondents recommended implementing training and change management programs for team members. Encouraging them to identify gaps and propose solutions, setting agreements on sharing time and information, and defining usage terms were advocated. Additionally, understanding the tools deeply and the issues they face, seeking solutions for improvements, identifying associated risks, and formulating mitigation strategies were highlighted. Adequate training for tool utilization was also stressed as pivotal in mitigating challenges and maximizing potential.

Table 4.19 (below) presents the participants' assessment of the adoption of social media tools. The table reveals that 67.5 percent of respondents affirmed the widespread adoption of social media tools across the organization, while 32.5 percent indicated otherwise. Furthermore, 57.5 percent reported that social media tools were exclusively adopted within their departments, while 42.5 percent disagreed. Moreover, 75 percent

of respondents acknowledged utilizing social media tools even in the absence of official

endorsement, with only 25 percent refraining from their use.

Table 4. 19   Extent of Adoption of Social Media tools in Konza Technopolis
               Development Authority

	No Frequency	Percent	Yes Frequency	Percent
Tool(s) implemented organization-wide	13	32.5	27	67.5
Departmental tools	17	42.5	23	57.5
Tool(s) not officially endorsed, yet respondent employs them nonetheless.	30	75.0	10	25.0

The respondents highlighted several challenges related to adopting and using social

media tools in project management. One of the significant challenges mentioned was

tracking progress, which can be difficult when using social media tools. Additionally,

respondents expressed concerns about adoption, as some team members may be

resistant to change and reluctant to adopt new tools. Another challenge mentioned was

the lack of know-how, indicating that some team members may need to be more

familiar with the tools or learn how to use them effectively. Report generation was also

mentioned as a challenge, as generating meaningful reports from social media tools can

be difficult. In addition to these challenges, the respondents also highlighted several

other concerns, such as time-wasting, as some team members may need to focus on

non-project-related matters while online. Misuse of social media was also mentioned

as a potential challenge, as team members may use the tools for purposes other than

project management.

Connectivity issues in remote areas and the need for know-how in using social media

tools were identified as challenging. Organisational culture was also mentioned as a

potential issue, as some organisations may need a culture that supports using social

media tools. Finally, respondents expressed concerns about information safety,

especially regarding critical or confidential client information. There is a risk that undesirable people may access such information, which can compromise the project and damage the organisation's reputation.

The respondent recommends several actions to address the challenges identified in the study. Firstly, they suggest training and change management to help team members understand the social media tools and their impact on the project. Secondly, they recommend scheduling time during work hours to use social media platforms, indicating clear terms and conditions of usage, and forming desirable groups to limit information flow to project team members, clients, and customers only. Thirdly, the respondent suggests envisioning leadership to champion the adoption and use of social media tools in project management. They also recommend that informational technology departments implement encryption to protect sensitive information. These recommendations address challenges such as tracking progress, adoption, lack of know-how, report generation, time-wasting, misuse of social media, connectivity issues in remote areas, organisational culture, and information safety.

4.6   Relationship Between the Study Variables

The primary aim of this study was to explore the linkage between the utilization of diverse social media tools and the visibility of KoTDA. To decipher the nature of the relationships between these variables, a correlation analysis was conducted. This analysis aimed to ascertain the character and strength of the associations between the various social media tools—namely, social networks, blogging, events, and microblogging—and the visibility of KoTDA. The Pearson correlation matrix, presented in Table 4.20 (below), encapsulates the holistic view of the interconnections among these social media tools and their correlations with KoTDA's visibility.

Moreover, the statistical significance of these correlations was meticulously evaluated to establish the robustness of the identified relationships.

Table 4.20 outlines the outcomes of the correlation analysis, effectively elucidating the inherent connections between social media tools and KoTDA's visibility. Each cell within the matrix embodies the Pearson correlation coefficient, which serves as an indicator of the intensity and direction of the relationship between a pair of variables. Notably, the provided significance levels for the correlations enable the determination of the statistical validity of these relationships.

Within Table 4.20, the "Social Networks" section commences the presentation of correlation coefficients. In the initial cell, the correlation coefficient of 1 underscores a flawless correlation between social networks and itself, as it corresponds to the same variable. Transitioning to the "Blogging" category, the correlation coefficient of .373** within the second cell signifies a statistically significant positive relationship between blogging and social networks at the 0.01 level of significance. These findings suggest that the observed association between blogging and social networks is unlikely to have arisen by mere chance.

Table 4. 20   Correlation Matrix

Social Media Tools	Correlation and Significance	Social Networks	Blogging	Events	Microblogging	Visibility
Social networks	Pearson Correlation	1				
Blogging	Pearson Correlation	.373**	1			
	Sig. (2-tailed)	0.009				
Microblogging	Pearson Correlation	.536**	0.264	1		
	Sig. (2-tailed)	0.000	0.070			
Events	Pearson Correlation	.444**	0.166	.400**	1	
	Sig. (2-tailed)	0.002	0.26	0.005		
Visibility	Pearson Correlation	.649**	.450**	.522**	.512**	1
	Sig. (2-tailed)	0.000	0.001	0.000	0.000	
	Sample size	48	48	48	48	48
** Correlation is significant at the 0.01 level (2-tailed).						

Continuing to delve into the realm of micro-blogging, the correlation analysis unveils noteworthy insights. In the third cell, the correlation coefficient of .536** signifies a

58

relatively robust positive relationship between microblogging and social networks. In addition, a correlation coefficient of .264 in the cell corresponding to microblogging and blogging suggests a moderate positive relationship between these variables. These correlations have achieved statistical significance at the 0.01 level.

Turning the spotlight to events, the fourth cell reveals a correlation coefficient of .444**, indicating a positive relationship between events and social networks. Similarly, the correlation coefficients of .166 and .400** in the cells related to events, blogging, and microblogging respectively, denote relatively weaker yet significant positive relationships. All three correlations maintain statistical significance at the 0.01 level. Lastly, in the context of visibility, the subsequent cells highlight the relationships between KoTDA visibility and various social media tools. The correlation coefficients .649**, .450**, .522**, and .512** for visibility and social networks, blogging, events, and microblogging respectively, point towards positive and reasonably robust relationships. Importantly, all these correlations attain statistical significance at the 0.01 level.

The study's methodology extends to employing multiple linear regression to gauge the collective explanatory influence of study variables on visibility. Moreover, the analysis entails conducting tests for both overall and individual significance through p-values, with the significance threshold set at 0.05. The outcomes of this multiple regression analysis, encompassing the model summary, Analysis of Variance (ANOVA), and regression coefficients, are presented in Table 4.21.

Within the model summary, as presented in Table 4.21, the coefficient of determination (R-square) signifies the proportion of variance in the dependent variable (visibility) that can be elucidated by the independent variables gauging marketing practices (social networks, blogging, microblogging, and events). Remarkably, these four marketing

practices collectively account for 55.3 percent of the moderate variance observed in KoTDA visibility. Consequently, the remaining 44.7 percent is attributed to other variables beyond the scope of this study.

In the pursuit of overall significance, the model successfully achieves this criterion, indicated by the p-value (0.00) being lower than the predetermined significance level of 0.05. Furthermore, as showcased in Table 4.21, the regression coefficients underscore their statistical significance. The constant, social networks, blogging, and events all possess p-values falling below the 0.05 significance level. However, microblogging does not meet this significance threshold, with its p-value (0.183) exceeding 0.05.

Table 4. 21   Regression Analysis Model

Model Summary					
R		R Square		Adjusted R Square	
.743		0.553		0.511	
Analysis of Variance Test of Model Significance					
	Sum of Squares	Degrees of Freedom	Mean Square	F-Value	Sig.
Regression	6.542	4	1.636	13.277	.000
Residual	5.297	43	0.123		
Total	11.839	47			
Dependent Variable: Visibility					
Predictors: (Constant), social networks, blogging, microblogging and events					
Multiple Regression Model Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B		Beta	t-value	Sig.
(Constant)	-2.278			-3.537	0.001
Social Networks	0.492		0.365	2.776	0.008
Blogging	0.298		0.229	2.071	0.044
Microblogging	0.211		0.168	1.352	0.183
Events	0.322		0.245	2.099	0.042
Dependent Variable: Visibility					

The predictive equation derived from the regression analysis is as follows: Visibility = -2.278 + 0.492SNS + 0.298BLOG + 0.322EVTS, where SNS, BLOG, and EVTS represent social networks, blogging, and events, respectively. This equation implies

that, on average, if social networks, blogging, and events increase by one unit, visibility would increase by 0.492, 0.298, and 0.322 units, respectively, assuming all other factors remain constant. Furthermore, social networks hold the most significant importance among the independent variables, as indicated by their standardised coefficient value (0.365) compared to the standardised coefficients of blogging and events.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This chapter encapsulates the pivotal aspects covered in chapter four. It succinctly presents the primary findings, encompassing both descriptive and inferential insights. This summarization serves as a compass, steering the subsequent presentation of conclusions and the dissemination of recommendations. Additionally, this chapter devotes attention to delineating the avenues that warrant further exploration.

5.2   Summary of Findings

The descriptive findings unveiled a substantial integration of social media within project management at Konza Technopolis. Prominent social media platforms, namely Instagram, Twitter, LinkedIn and Facebook, played pivotal roles in stakeholder communication, project updates dissemination, and project marketing. Remarkably, 80 percent of respondents acknowledged the efficacy of social media as a tool for project communication, with 60 percent affirming its effectiveness in project marketing endeavours.

The research also underscored the profound importance of social media tools in the domain of project management. The results strongly indicated that these tools had a considerable impact on collaboration, communication, and leadership dynamics within project teams, thereby inducing cultural transformations. Notably, the utilization of social media fostered more efficient and effective collaborative work across geographical boundaries. These tools facilitated seamless information exchange among team members, enabled the optimization of initiatives, and provided insights for potential project enhancements. Moreover, the study illuminated diverse advantages brought to KoTDA, including cost savings in meetings, telecommunication, and

recruitment, along with enhanced collaboration, team morale, and communication. Respondents notably ranked social media platforms like Facebook, Twitter, LinkedIn, and Instagram as integral for both project communication and marketing endeavours, with 85 percent acknowledging their importance in communication and 75 percent in marketing aspects.

The research identified a multitude of potent social media strategies for effectively marketing Konza Technopolis. These strategies encompassed leveraging social media influencers, employing social media advertising, initiating social media contests, and executing social media promotions. Impressively, 65 percent of respondents concurred on the effectiveness of social media influencers for project marketing, while 55 percent validated the potency of social media advertising.

In summation, this study substantially delineated the robust integration of social media tools within the fabric of project management at Konza Technopolis. The platforms Twitter, Facebook, LinkedIn, and Instagram emerged as pivotal mediums for stakeholder engagement, project updates, and promotional campaigns. Furthermore, the study solidified the significance of social media tools in amplifying collaboration, communication, and leadership within project teams, prompting notable cultural shifts. Lastly, a myriad of adept social media strategies were unearthed to effectively market Konza Technopolis, elucidating the efficacy of influencer collaboration, advertising endeavors, contests, and promotional activities.

5.3   Conclusion

The primary objective of this research was to examine how the implementation of social media tools influences project management within the framework of the Kenyan government agency, KoTDA. The outcomes of the study underscore the substantial benefits that social media tools bring to project management, particularly when

contrasted with conventional methodologies. These advantages encompass heightened productivity, improved performance, enhanced collaboration, and superior communication. Additionally, the utilization of social media platforms facilitates the exchange of experience and knowledge, contributing to an enriched project management landscape.

Respondents highlighted that the integration of social media tools induces significant cultural shifts within the realm of project management. These transformations encompass elevated creativity, augmented social awareness, and the embracing of novel communication methods. Moreover, the adoption of social media tools ushers in financial advantages by curbing expenditures on meetings, telephone calls, and recruitment processes. Notably, the adoption of prominent social media platforms like Twitter, Facebook, LinkedIn, and Instagram proves to be an effective avenue for engaging stakeholders, disseminating project updates, and conducting project marketing endeavors.

Furthermore, the cultural transformations stimulated by social media implementation have yielded more efficient and effective project teams. The strategies identified throughout the study hold the potential to be harnessed to even greater effect, thereby bolstering the realm of project management at KoTDA.

5.4   Recommendations

Drawing from the study's insights into social media marketing and its impact on the performance of PPPs projects, particularly exemplified by the Konza Technopolis case, the ensuing recommendations emerge:

Incorporate Social Media Tools in Project Management: Given the study's findings showcasing the positive influence of social media tools on project management, encompassing heightened productivity, enhanced collaboration, and facilitated

knowledge sharing, it is strongly advised that PPPs projects assimilate these tools into their operational framework. Integrating social media tools can significantly enhance project management.

Cultivate a Culture of Social Media Adoption: The study underscores the necessity for a cultural shift to engender successful social media initiatives. PPPs projects ought to foster a culture that actively encourages and supports the adoption of social media tools. This cultural alignment is pivotal in ensuring effective utilization of these tools.

Leverage Social Media for Knowledge Management**:** Recognizing the role of social media tools in augmenting knowledge management within project management, PPPs projects are urged to capitalize on this potential. Employing social media can substantively amplify knowledge sharing and cultivate communities of best practices.

Harness Social Media for Remote Work: The study delineates how social media has streamlined remote work, transcending antiquated communication methods and yielding cost savings. Embracing remote work and harnessing social media's capabilities can significantly enhance communication and collaboration among team members in PPPs projects.

Facilitate Real-time Feedback from Stakeholders**:** Social media tools empower project teams with the ability to promptly obtain feedback from stakeholders and customers. PPPs projects are encouraged to harness social media as a means to swiftly gather feedback and identify project pain points, thereby expediting responsive actions.

Engage in Global Peer Collaboration**:** The study highlights the transformative role of social media in facilitating global peer collaboration, transcending geographical barriers. PPPs projects should capitalize on this by leveraging social media platforms to collaborate with peers worldwide, accessing diverse expertise and insights.

Real-time Information Sharing: Given that social media tools enable real-time sharing of challenges and solutions among project teams, PPPs projects should harness these platforms to disseminate information instantly. This practice optimizes initiatives and identifies avenues for refinement.

Cost Reduction: Recognizing the potential for cost savings in areas like meetings, telecommunication, and recruitment through the use of social media tools, PPPs projects should embrace these tools to economize and optimize resource allocation.

In sum, the study underscores the affirmative impact of social media tools on the efficacy and performance of PPPs projects. The resulting recommendations advocate for the incorporation of social media tools within project management strategies to enhance overall efficiency, collaboration, and knowledge sharing in these endeavors.

5.5   Limitations

The study was conducted with a relatively small number of participants, which could raise concerns about the generalizability of the findings to a larger population. Recognizing this limitation, it is important to acknowledge that a larger and more diverse sample size would have enhanced the study's representativeness and strengthened the validity of the results. Additionally, the research was influenced by external factors that were beyond the control of the researcher. Social media trends, technological advancements, and cultural shifts can significantly impact the frequency and manner in which individuals engage with social media tools. Recognizing and acknowledging these external influences is crucial for interpreting the results accurately and understanding the contextual factors that may have influenced participants' social media usage.

5.6 Areas for Further Study

The study's focal point centered around the interplay between social media marketing and the performance of PPPs projects, with specific emphasis on the Konza Technopolis case. For further exploration of this subject, various intriguing avenues warrant consideration.

First and foremost, there lies a compelling opportunity to delve into the impact of social media on stakeholder engagement within PPPs projects. This prospective research endeavor would delve into how social media platforms can effectively engage stakeholders within the context of Konza Technopolis. The spectrum of stakeholders—ranging from investors and policymakers to the general public—would be under scrutiny. Such an inquiry would scrutinize how social media not only facilitates engagement but also nurtures transparent and collaborative relationships between project managers and stakeholders.

Another captivating avenue for exploration pertains to the role of social media in shaping the brand identity of Konza Technopolis. This study would probe into the methods by which social media can serve as a potent tool in sculpting a robust brand image for the Technopolis. The investigation would extend to how social media platforms can be adroitly harnessed to propagate the institution's vision and mission, beckon investments, and allure top-tier talent. Furthermore, a nuanced examination would be conducted on how distinct social media platforms can be deftly employed to target diverse audiences and fulfill assorted marketing objectives.

In parallel, the potency of social media analytics as an instrument for quantifying the performance of PPPs projects beckons exploration. This inquiry would scrutinize the utility of social media analytics in evaluating the efficacy of Konza Technopolis' social media marketing endeavors. Metrics encompassing engagement, reach, and sentiment

67

would be subjected to meticulous analysis, offering insights into the tangible impact of social media on the project's overarching performance.

Furthermore, a promising area ripe for investigation revolves around the cultural impediments that potentially thwart the integration of social media within PPPs projects. This study would diligently probe into the cultural dynamics that hinder the seamless adoption of social media in project management within Konza Technopolis. Insights would be gleaned into the perceptions of project managers and team members concerning social media, their inclinations toward its utilization, and the obstacles they encounter when endeavoring to actualize social media initiatives.

In summation, while the present study centered on the nexus between social media marketing and PPPs project performance, an array of compelling areas beckon further exploration. This encompassing panorama encompasses stakeholder engagement, brand building, social media analytics, and the cultural dimensions that influence social media's integration within the project management realm of Konza Technopolis.

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APPENDIXES

Appendix I   Introduction Letter

Dear Respondent,

RE: REQUEST TO PARTICIPATE IN THE STUDY

I am Mercy Wangari Ndirangu, currently pursuing a Master of Arts in Project Planning and Management at the University of Nairobi (UoN). The focus of my research revolves around the topic: "Social Media as a Marketing Tool: A Case Study of Konza Technopolis."

The primary objective of this study is to delve into KoTDA as the subject of investigation. In this pursuit, I intend to employ a questionnaire as the data collection instrument. I cordially request your valuable time to participate in this survey.

Please be assured that any information shared during the course of this study will be treated with the utmost confidentiality and strictly employed for academic purposes.

I would highly appreciate your cooperation in this endeavor.

Very Respectfully,

Mercy Ndirangu

Appendix II   Questionnaire

Dear Respondent,

I am Mercy Wangari Ndirangu, a graduate student enrolled in the Department of Management Science and Project Planning within the Faculty of Business and Management Sciences at the University of Nairobi. Currently, I am engaged in a research project centered around the theme of "Social Media Marketing and Performance of Public Private Partnership Projects: A Case Study of Konza Technopolis."

Kindly provide your responses to the following questions with utmost honesty.

Your input is invaluable to the success of this research endeavor.

Section A: Demographic Information

Please respond by encircling (O) where applicable:

a) Gender

      i. Male   (   )

      ii. Female(   )

b) Age

      i. 25 and Below ( )

      ii.   26 - 35   ( )

      iii. 36 - 45   ( )

      iv.   46 – 55   (   )

      v.   Over 55   (   )

c) Experience related to Project Management/implementation/delivery (In general, not only in present company)

      i. Below 1 Year (   )

      ii. 1 – 5 years   (   )

      iii.   6 – 10 years   (   )

      iv.   Over 10 years (   )

d) Project Role in Organisation

     i. Project Management ( )

     ii. Program Management (   )

     iii. Project Support (   )

     iv. Change Management (   )

     v. Any other (Specify)

e) Experience in present KoTDA (Related to Project Management, implementation, delivery)

     i. Below 1 Year (   )

     ii. 1 – 5 years   (   )

     iii. 6 – 10 years (   )

     iv. Over 10 years (   )

f) For how long have you used social media tools in project management?

     i. Never   ( )

     ii. Less than a year   (   )

     iii. 1- 5 years   (   )

     iv. 6 - 10 years (   )

     v. Over 10 years (   )

Section B: Social Media Tool(s) Usage

Please use the table provided below to specify your usage level for each designated social media tool in various usage areas. Please denote your usage intensity by circling () or marking (√) as appropriate: high (H), medium (M), or low (L).

Table 1: Social Media Tools' use

Adopted from: Harrin (2011)

Social Media Tools	Level of use (indicate H, M or L)										
	Business			Project Work			Personal				
Facebook	H	M	L	H	M	L	H	M	L		
LinkedIn	H	M	L	H	M	L	H	M	L		
Twitter	H	M	L	H	M	L	H	M	L		
Instant Messaging (e.g.,	H	M	L	H	M	L	H	M	L		
WhatsApp),	H	M	L	H	M	L	H	M	L		
Blogging	H	M	L	H	M	L	H	M	L		
Wiki	H	M	L	H	M	L	H	M	L		
Podcast	H	M	L	H	M	L	H	M	L		
Video Podcast Other Social											

a) a) Which social media platform(s) do you suggest using, and what are your reasons for recommending them?

b) How crucial are social media instruments to your job? Kindly mark all appropriate options with a check (√) wherever applicable. Multiple choices are permissible. Communication efficiency

Team members Collaboration

Clients Collaboration

Networking

Cost saving

Knowledge sharing

Section C: Different Project Categories Categorized by Project Output

Please refer to the following chart to identify the main social media

platform(s) utilized for each project classification, by marking the corresponding choice: encompass () the extent of utilization as described: extensive (E), moderate (M), limited (L), or indicate as not suitable (NS) where applicable.

Table 2: Project Type and Project Product Type

	Level of Importance to PM (indicate H, M, L or NA)	Social Media tool(s) used, (primary)
Project Type	**Project Product (Examples)**	
Administrative	installing a new accounting system or Customer Relationship Management system (CRM), confirming project schedule	H M L NA
Construction		H M L NA
	a data center or base station	
Software Development	a mobile/online app	H M L NA
Design of Plans	architectural or engineering plans, e.g., new network rollout	H M L NA
Equipment or System Installation	Internet installation or data center collocation	H M L NA
Event or Relocation		H M L NA
Maintenance of Process Industries	Marketing or a move into a new building	H M L NA
New Product Development	Infrastructure or service upgrade	H M L NA
Research	a new product or service	H M L NA
Other	a feasibility studies.	H M L NA

Section D: Social Media Use in Project Management

Kindly assess the ensuing statements on a scale of 1 to 5, with 5 signifying "Strongly Agree" (SA), 4 as "Agree" (A), 3 denoting "Neutral" (N), 2 representing "Disagree" (D), and 1 indicating "Strongly Disagree" (SD).

Item	Description	SA	A	N	D	SD
1.	Social media tools provide tangible benefits compared to my current management approach projects.					
2.	Using social media tools has injected an element of enjoyment into project management.					
3.	Social media tools outperform alternative tools in project management.					
	I find social media tools useful in my job.					
4.						
5.	I find that I can complete tasks more efficiently when utilising social media tools. Incorporating social media tools enhances both my productivity and overall performance.					
6.	Social media tools provide an outstanding vehicle for fostering communities of best practice.					
7.	To ensure the success of initiatives involving social media tools, a cultural shift that embraces novel work approaches is imperative. By adopting social media tools, project managers and teams gain access to a paradigm of experience, collaboration, and knowledge exchange.					

a) **Enhancing Knowledge Management through Social Media Tools in Project Management:** In what ways do social media tools contribute to the facilitation of knowledge management within the realm of project management?

b) **Cultural Shifts Induced by Social Media in Project Management:** Could you elaborate on the transformative cultural changes that have been precipitated by the integration of social media within project management practices?

c) **Enriching Experiences, Collaboration, and Knowledge Sharing via Social Media Tools:** How do social media tools specifically open avenues for project managers and their teams to engage in novel experiences, foster collaboration, and facilitate the exchange of knowledge?

(d) Benefits of social media tools in project management

Financial benefits	Yes	No
Meeting Saving costs Telephone saving costs.		
Recruitment saving costs.		
No financial benefits were realised.		
Efficiency benefits	**Yes**	**No**
Improved collaboration		
Improved team morale		
Improved communication.		
No efficiency benefits realised.		

Section E: Social Media Tools Contribution to Project Visibility.
Please rate the following statements on a scale of 1-5 where 5: (SA), 4: (A), 3: (N), 2: (D), 1: (SD

Item	Description	SA	A	N	D	SD
1.	Social media is just another technology rather than something that enables new ways of working.					
2.	IT departments and leaders still need to be made aware of using social media tools, yet users see them as productivity tools.					
3.	Adopting and implementing social media tools is a technical challenge.					
4.	Support from senior management is not important in implementing social media tools in project management.					
	Is it necessary to start with test cases to prove the value of social tools in project management?					
5.	It is optional to align the vision for enterprise social to the current business priorities, challenges, and culture.					
	Company culture is the most significant contributor to resistance to					

a) How can organizational leaders provide support by integrating and utilizing social media platforms within project management?

b) In the role of a project manager, how can you guarantee the congruence of the social media strategy with business objectives, obstacles, and the prevailing corporate culture?

c) What methods should a project manager employ to successfully acquaint the team and the organization with novel social media tools?

d) What approaches could be taken to address the challenges associated with social media tools while also exploiting their advantages in the realm of project management?

Tool(s) Adoption

Please tick (√) where applicable:

Have tools been officially adopted?	Yes	No
Across entire organisation		
Only in the department.		
Those not officially in use, but respondent uses them anyway.		

a) Kindly provide a concise overview of any challenge(s) that have not been mentioned previously.

b) What suggestions would you propose to alleviate the challenge outlined earlier?