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THE IMPACT OF SOCIAL MEDIA ACTIVISM ON DISASTER AND CRISIS MANAGEMENT IN GHANA

BY

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IMPACT OF SOCIAL MEDIA ACTIVISM ON DISASTER AND CRISIS MANAGEMENT IN GHANA

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A THESIS SUBMITTED TO THE DEPARTMENT OF OPERATIONS AND MANAGEMENT INFORMATION SYSTEMS, UNIVERSITY OF GHANA BUSINESS SCHOOL, UNIVERSITY OF GHANA, LEGON, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF PHILOSOPHY (MPHIL) IN MANAGEMENT INFORMATION SYSTEMS DEGREE

OCTOBER 2025

DECLARATION

I, **ABDUL-KUDUS IDDRISU**, do hereby declare that this work is the result of my own research and has not been presented by anyone for any academic award in this or any other university. All references used in the work have been fully acknowledged.

I therefore bear responsibility for any shortcomings.

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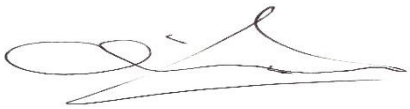

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ABSTRACT

Social media activism has become an indispensable tool in modern disaster and crisis management, offering new opportunities for communication, coordination, and public engagement. In Ghana, where disaster response systems face logistical and infrastructural challenges, social media activism provides a promising platform for mobilizing resources, disseminating timely information, and influencing public behavior. Despite its growing relevance, limited empirical research has examined how social media activism shapes disaster and crisis management outcomes within the Ghanaian context. This research evaluated the influence of social media activism on disaster and crisis management, utilizing the information systems success model as a guiding framework. Specifically, the study examines the influence of information quality, service quality, system quality, and activism intensity on social media use, and how such use translates into net benefits during crises. A quantitative research design was adopted, with data collected from 400 respondents across governmental agencies, NGOs, and civil society groups engaged in crisis management. Smart-PLS structural equation modeling was employed to test the proposed hypotheses.

The findings reveal that information quality, service quality, and activism intensity are significant positive predictors of social media use, while system quality showed no significant effect. Additionally, social media use strongly predicted net benefits in disaster and crisis management. These results suggest that the effectiveness of social media activism in Ghana depends more on the reliability of information, responsiveness of services, and intensity of activism rather than technical system features. The study contributes to theory and practice by highlighting implications

for policymakers, emergency managers, and digital activists in enhancing crisis response strategies. As a result, further study ought to concentrate on examining the direct and measurable impact of social media activism on disaster and crisis management outcomes, beyond just information dissemination.

DEDICATION

To my late parents – Mr. and Mrs. Iddrisu Andani

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
ALS	Amyotrophic Lateral Sclerosis

AR	Augmented Reality
AVE	Average Variance Extracted
BCM	Business Continuity Management
CB	Covariance Based
D&M	Delone and Mclean
DG	Geodesic Discrepancy
DLUS	Discrepancy Least Unweighted Squares
EPA	Environmental Protection Agency
GIS	Geographic Information Systems
GNFS	Ghana National Fire Service
GOF	Goodness of Fit
GPF	Google Person Finder
HTMT	Hetero-Trait-Mono-Trait
IS	Information Systems
ISSM	Information System Success Model
NADMO	National Disaster Management Organization
NGOs	Non-Governmental Organizations
PLS-SEM	Partial Least Squares-Structural Equation Modelling
PRAAD	Public Records and Archives Administration Department
SEM	Structural Equation Modelling
SERVQUAL	Service Quality
SM	Social media
SNS	Social Networking Sites

SPSS	Statistical Package for Social Sciences
SRMR	Standardized Root Mean Residual
TAM	Technology Acceptance Model
VIF	Variance Inflation Factor

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Over the past few years, social medias' impact on our lives has become rather evident (Sharma & Behl, 2022). First, it serves as a medium for maintaining connections with friends and sharing personal stories as well as political activism; thus, it has evolved into a potent tool for social and political events. Social media activism influencing disaster and crisis management has also attracted a lot of interest (Etter & Albu, 2021; Mauroner & Heudorfer, 2016). Along with human-made crises, including pandemics and social upheaval, the world has seen an increasing number of tragedies concurrent with the growing frequency of natural disasters, including earthquakes and hurricanes (Harrison & Williams, 2016; Quarantelli et al., 2018). Often referred to as "clicktivism," or "slacktivism," social media activism uses social media channels to spread awareness, advocate for change, and organize support around a range of social and environmental concerns (Murthy, 2018). Individuals or groups use platforms like Facebook, Twitter, Instagram, and more to transmit messages, share stories, and start movements (Hestres, 2017; Shahbaznezhad et al., 2021).

Apart from official reaction systems, social media activities support community resilience by means of peer-to-peer support, distribution of preparedness guidelines, and mobilization of grassroots projects. Local activists and environmentalists predominantly utilize social medias to promote awareness of environmental concerns and advocate for sustainable solutions (Inusah, 2023). Social media activity determines much of the mobilization of resources during crises and natural disasters by supporting grassroots campaigns, crowdfunding projects, and calls to compile massive support (Capozzi & Rucci, 2014). Quick mobilization of funds, volunteers, and relief

goods are facilitated by social media. The "Ice Bucket Challenge" is one well-known example of how a social media-driven campaign swiftly coordinated resources to assist research on Amyotrophic Lateral Sclerosis (ALS) (Ng et al., 2014). Social media channels can also help to gather supplies and direct them to the affected areas during crises. This guarantees a continuous flow of support, which shapes the response to crises and natural disasters; thus, social media action encourages local disaster management involvement. Not least, it helps people actively engage in projects related to preparedness, reaction, and recovery (Vera-Burgos & Padgett, 2020). Moreover, social medias can be used to coordinate volunteer work and provide required information to online groups and communities, giving local search and rescue operations as well as community support campaigns, a stage (Capozzi & Rucci, 2014). Social media campaigners have shown how one can affect decisions and policies during natural disasters and crises, by pointing out shortcomings in disaster response and recovery, they will be able to exert pressure on companies and authorities to implement required changes and repairs.

In recent times, social medias have gained popularity in Ghana as individuals and organizations utilize these platforms to advocate for change and address social issues (Inusah, 2023). This has transformed the manner in which information regarding natural disasters and crises is disseminated. Contrary to traditional media, social media enables immediate communication, enabling affected individuals to quickly share updates, ask for help, and provide support (Oppong et al., 2022). During emergencies such as natural disasters, accidents, or public health emergencies, social media serves as an essential communication tool for authorities, relief organizations, and the public in Ghana.

Ghana encounters a range of natural and man-made calamities such as floods, fires, and industrial incidents and effective disaster response in the country always requires the collaboration of government entities, non-governmental organizations, and local populations (Kelly & Addo, 2023). Moreover, limited resources, infrastructure deficits, and communication barriers hinder efficient disaster response. Utilizing social media extensively presents both benefits and challenges in dealing with disasters and crises; fortunately, an increasing number of Ghanaians are engaging with platforms such as Facebook, Twitter, and WhatsApp, leading to a bigger online presence. Recent data shows that more than 7.40 million individuals in Ghana are actively utilizing social media (Kemp, 2024).

Since social media enables quick information sharing and resource mobilization during crises, it can also be a great tool in crisis management and lowering of disaster risk (Ogie et al., 2022). Furthermore, the National Disaster Management Organization (NADMO) engaged in crisis communication and leveraging social media to improve its disaster response capacity (Dodzi et al., 2019). Besides, advocating social and environmental concerns in Ghana depends critically on the use of social media. Local environmentalists and activists use these platforms to raise awareness of problems including water management by means of social media, thereby illustrating the wider influence of social media on crisis management outside current crises (Hopke & Paris, 2022). Despite the important role social media may play in crisis and disaster management, research on this area is limited.

1.2 Research Problem

Research on social media activism has mostly concentrated on social media communication for disseminating information (Atanga, 2020; Bukar et al., 2022; Inusah, 2023; Nartey & Yu, 2023; Ogie et al., 2022) and are largely literature reviews (Ganoe et al., 2023; Kankanamge et al., 2020; Luna & Pennock, 2018). For example, research by Bukar et al. (2022) and Ogie et al. (2022) explored the impact of technology on crisis communication as well as the factors influencing the effectiveness of social media content, whilst Inusah (2023) investigated social media activism aimed at enhancing water and sanitation conditions in Ghana. Further, Atanga (2020) investigated the contribution of local leaders to disaster risk management, while Nartey and Yu (2023) assessed how social media affordance empowered activists during the "#FixTheCountry" campaign. While research has highlighted the importance of technology in crisis communication and the effectiveness of social media content, they predominantly concentrated on information dissemination and participation (Bukar, Sidi, et al., 2022; Ogie et al., 2022). Likewise, other studies underscored the utilization of social media for advocacy, community involvement, and awareness initiatives (Atanga, 2020; Inusah, 2023; Nartey & Yu, 2023). Nonetheless, there exists limited research examining how prolonged social media engagement affects decision-making processes at the policy level or facilitates equitable resource distribution during crises.

Current research primarily focuses on communication strategies and thematic analyses, leaving a gap in understanding how sustained activism can lead to practical results like policy influence or disaster response mobilization (Akbar et al., 2024; Haupt, 2021). Moreover, research on social media activism's effectiveness in regions with limited digital access is limited, potentially hindering its reach and influence (Phillips, 2024). The research highlights the necessity of further

examining the influence of social media activism on disaster management, particularly in underrepresented regions like Ghana, where policy implications and infrastructure challenges are substantial.

Studies on the use of social media in disaster and crisis management largely emphasize its practical advantages (Ganoe et al., 2023; Luna & Pennock, 2018). Social media platforms have emerged as vital tools for managing public communication during disasters. Kankanamge et al. (2020) demonstrated that visual components substantially augment public involvement and boost collective action. Similarly, Ogie et al. (2022) illustrated the impact of social media on disaster recovery by highlighting contextual elements that affect the efficacy of campaigns. Beyond these insights, other studies reinforce the practical benefits of social media (Baraldo & Franco, 2024; Domalewska, 2019; Seneviratne et al., 2024). Seneviratne et al. (2024) found that social media improves stakeholder coordination by providing emergency managers with tools to disseminate alerts, assess public reactions, and collect real-time data. Additionally, Baraldo and Franco (2024) highlighted the importance of citizen-generated data as a digital sensor for enhancing crisis modeling and monitoring systems. Social media platforms also improve situational awareness during disasters by connecting stakeholders like governmental bodies, humanitarian organizations, and affected communities (Domalewska, 2019). Nevertheless, a major gap remains in understanding how social media activism specifically drives public participation, policy change, and the mobilization of resources in disaster and crisis management.

Yet still, extant literature demonstrates the difference in the emphasis of research on social media activism within the realms of disaster and crisis management across various contexts. Studies in

developed nations, including the USA and Australia, have underscored sophisticated frameworks, engagement strategies, and quantifiable utilization of social media for disaster resilience and emergency response, emphasizing advantages such as situational awareness and stakeholder coordination (Lam et al., 2023; Luna & Pennock, 2018). Research in developing nations such as Indonesia has examined the nexus between social media and crisis awareness, primarily emphasizing organizational outcomes like business continuity management (Kurniawan & Tambunan, 2023). In Africa, some studies including that of Abdulhamid et al. (2021) and Opeibi (2019) mostly focused on particular applications, including digital volunteerism, while neglecting the wider systemic integration and problems of social media in emergencies. Specifically in Ghana, most studies have concentrated on aspects like the use of social media during the COVID-19 pandemic and its emotional effects (Malm et al., 2022), leaving a gap in understanding how social media activism shapes disaster and crisis management in the Ghanaian context. Notwithstanding global progress in utilizing social media for disaster management, there exists a paucity of studies about the contextual intricacies and systemic incorporation of social media activism in disaster and crisis management in Ghana (Seneviratne et al., 2024). Therefore, this study helps bridge the gap in existing literature by examining the connection between social media activism, disaster, and crisis management.

1.3 Research Purpose

The purpose of this study is to evaluate how social media activism influences disaster and crisis management in Ghana.

1.4 Research Objectives

Specifically, the following objectives are formulated to guide the study;

RO1: To assess the utilization of social media in disaster and crisis management in Ghana.

RO2: To evaluate the effectiveness of social media activism in information dissemination in Ghana.

RO3: To analyze the challenges and opportunities of social media activism in Ghana.

1.5 Research Questions

This study aims to evaluate the influence of social media activism on disaster and crisis management in Ghana by addressing the following research questions.

RQ1: What is the extent of social media platform utilization by stakeholders in Ghana?

RQ2: What indicators are used to measure the effectiveness of social media activism in terms of reach, engagement, and impact on information dissemination in Ghana?

RQ3: What are the key challenges and opportunities associated with using social media platform for activism in Ghana?

1.6 Significance of Research

The significance of this study discussed according to research, practice, and policy contributions. In terms of research, this study will enhance academic knowledge on the changing role of social media in disaster and crisis management. It highlights the unique context of Ghana, where social

media activism has recently become more prominent. The study will also offer empirical evidence on how social media activism affects disaster response and preparedness, thereby contributing to the expanding body of literature in this field. Researchers can use these findings to inform further studies and refine theories related to disaster communication and management.

The findings of the study can help Ghanaian disaster and crisis management professionals in their daily work. Knowing how social media activity affects their work helps them to make good use of these channels for real-time information sharing and community involvement during crises. It will also underline the need to include social media strategies into crisis management strategies so that authorities and businesses may use these channels to maximize efforts at disaster response.

The findings of the study can guide policymakers in Ghana to develop policies and frameworks that promote the responsible use of social media in times of disaster. This guarantees the effective public distribution of important knowledge and helps to slow down the dissemination of misleading information. The study will further emphasize the importance of collaboration between government agencies, emergency responders, social media activists, and influencers in developing a unified strategy for disaster communication and management.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

Chapter one provided the background of the study, outlining the problem statement, research purpose, objectives, questions, and significance. This chapter is organized into five sections. The first section reviews relevant literature on social media, covering its overview, key concepts, and the role of social media activism. The second section examines popular social media platforms, discussing their definition, the nature of social media in Ghana, classification, recent trends, and associated security challenges. The third section reviews literature on disaster and crisis management to identify research gaps and key issues. The fourth section narrows the focus to disaster and crisis management in Ghana. The final section reviews empirical studies to justify the necessity of this research.

2.2 Social-Media Defined

Social media refers to a collection of internet-based platforms that are built on the principles and technologies of Web 2.0, enabling users to create and share content (Kaplan & Haenlein, 2010). Underlining their interactive character, this definition emphasizes the capacity to let users create and distribute content, so encouraging social interaction and global communication. Kietzmann et al. (2011) described social media as a wide range of web-based and mobile tools that transform communication into interactive dialogue. This emphasizes its dynamic and participatory nature, where users engage in two-way interactions that shape the flow of information. Boyd and Ellison (2007) defined social media as an online service that enables individuals to create public or semi-public profiles within a restricted system, connect with other users, and navigate both their own

connections and those of others within the network. This perspective stresses the networking function of social media, where users build and maintain relationships across the digital space. Merriam-Webster, on the other hand, defines social media as a type of electronic communication that allows users to form online communities to exchange information, ideas, personal messages, and other content. This idea underlines the several ways social media channels facilitate communication and community-building.

For the purposes of this study, the definition by Kaplan and Haenlein (2010) essentially captures the function of social media as a platform for user-generated content and social interaction, which is vital for comprehending how social media activism can influence disaster and crisis management efforts. The focus on the production and sharing of materials fits the way activists use social media to disseminate knowledge, organize support, and coordinate activities during crises and natural disasters. Real-time text, audio, and video communications are made possible by social media channels. That is, users can upload and distribute different kinds of material, including text posts, images, videos, and links, exchange messages, and form groups for discussions. Personal updates, news stories, multimedia, and more can all find place here. Social media once again promotes interaction by means of likes, comments, shares, and reactions. These exchanges allow users to share their ideas, offer comments, and interact with posts created by others (Lutkevich, 2023). Features for creating networks and connections abound on social media channels. People can interact with colleagues and friends that share interests. Social media helps online communities and groups to be created. People can join groups depending on their interests, jobs, or passions, so enabling targeted debates and teamwork (Lin, 2022).

More importantly, social media provides a means of knowledge where users may find updates from many sources, news, and trends. Algorithms could create material depending on personal preferences. This links people from all around the globe, transcending national borders (Lutkevich, 2023). Since its main goal is to inspire users to actively contribute ideas, the worldwide reach of this medium helps to promote cross-cultural communication and understanding. The richness of the platform depends fundamentally on the user-generated content. Features and goals of social media channels differ greatly. Popular instances abound from Facebook, Twitter, Instagram, WhatsApp, LinkedIn, YouTube, and TikTok. Every platform meets different user needs by having special features, target audiences, and tools. These platforms have evolved into essential components of modern communication, knowledge sharing, and social interaction, so influencing how people and companies interact in the digital era (Lin, 2022).

Social media first emerged in the late 1990s with sites like SixDegrees, which allow users to build profiles and friend lists. This was followed by LiveJournal in 1999, which first popularized blogging as a social tool, and Friendster in 2002, which concentrated on linking people through their social medias (Ortiz-Ospina, 2019). Several important social media sites that set the foundation for current social media first surfaced in the early 2000s. Launched in 2003, LinkedIn aimed at professional networking. MySpace, also launched in the same year, became well-known for personal profiles and music sharing (Kapoor et al., 2018). But launched in 2004, Facebook transformed social media with its more user-friendly interface and extensive social tools. Originally started in 2005, YouTube changed video sharing and consumption (Ortiz-Ospina, 2019). Characterized by user-generated content, usability, and interoperability, the idea of Web 2.0 was absolutely vital in the social media explosion. Profiting on these ideas, platforms like

Twitter (2006) and Instagram (2010), respectively provided real-time communication and visually oriented social media (Dwivedi et al., 2022).

2.3 Activism

Activism is the intentional and fervent promotion aimed at advancing social, political, environmental, or cultural transformation. According to Christina (2022), it involves intentional efforts to enhance awareness, cultivate support, and alter public opinion or governmental decisions around significant issues or causes. Activists underscore pressing concerns and advocate for substantial change through various activities such as demonstrations, lobbying, educational initiatives, and awareness campaigns (Keith, 2023). Activism fundamentally seeks to address systemic issues and amplify the voices of affected individuals or groups. Through public demonstrations and rallies, activists highlight injustices, thereby galvanizing individuals around shared objectives. Another significant avenue is lobbying, wherein activists engage directly with stakeholders and politicians to promote institutional or legislative reforms. Awareness campaigns and educational initiatives inform the public, thereby fostering awareness and generating substantial support (Jessani et al., 2022).

Activism serves as a mechanism of accountability, compelling governments, corporations, and other powerful institutions to justify their actions. Activists organize boycotts, sit-ins, and various forms of nonviolent protest to challenge established power dynamics and advocate for justice and equality (John et al., 2018). Activism is not a uniform endeavor, it manifests in various contexts, ranging from grassroots initiatives to global campaigns, all united by the shared objective of effecting change (Lin, 2018). Historically, activism has served as a significant catalyst for social

change, impacting policy reforms, civil rights movements, and revolutions. It empowers individuals to seek justice, challenge inequalities, and influence the trajectory of their nations (Bobrow, 2022). Consequently, activism is an essential practice for addressing the evolving challenges of modern society and advocating for a more equitable future.

2.4 Social media Activism

Social media activism is utilizing platforms like as Facebook, WhatsApp, Twitter, and Instagram to disseminate awareness, mobilize support, and advocate for social and political causes (Liu et al., 2020). Social media activism influences disaster and crisis management by disseminating information about disasters, coordinating relief operations, and mobilizing communities to respond effectively to crises. This style of activism leverages social media's extensive reach and connectivity to disseminate critical information swiftly during natural catastrophes, enabling prompt responses and assistance from various parties. In disaster and crisis management, social media activism facilitates real-time updates, community engagement, and contact with local and international stakeholders involved in relief efforts (Ogie et al., 2022). It facilitates collaboration among individuals and enterprises, optimizes resource allocation, and enhances strategic planning for responses by augmenting catastrophe preparedness and response in the region.

Social media activity expands its influence in the framework of disaster and crisis management by allowing quick communication during crises. Studies on the use of social media in crisis communication have revealed that governments and companies can interact with people during crises like the COVID-19 epidemic (Cho et al., 2023; Huang, 2023). It also supports real-time updates on disaster events and risk communication (Liu et al., 2020). Moreover, social media has

evolved into a useful tool for disaster relief efforts since it enables fast mobilization of resources and support during crises (Alexander, 2014). For efficient communication and coordination among stakeholders, it helps overcome obstacles in humanitarian response and so supports more effective disaster management initiatives (Maghsoudi & Moshtari, 2021). Awareness of many issues, including crises and disasters, depends much on social media activity. During an emergency, it helps to coordinate, share real-time information, and ease communication, thereby strengthening disaster and crisis management.

By means of fast information distribution, real-time communication, and community involvement, social media helps to manage crises and disasters. Platforms including Twitter, Facebook, and WhatsApp are vital for governments, businesses, and people to provide timely updates, warnings, and instructions to the public during disasters, by helping in quick decision-making and response efforts (Ogie et al., 2022). By improving situational awareness and guiding the distribution of resources, social media also allows affected communities to document events, share their stories, and ask for help (Saroj & Pal, 2020). Furthermore, helping to mobilize volunteers and coordinate relief efforts on social media channels helps to increase the effectiveness of crisis management operations (Aldamen & Hacimic, 2023). Notwithstanding its advantages, the fast dissemination of false information on these channels presents major problems that might aggravate crises (Mensah-Bonsu, 2022). Nevertheless, especially in underdeveloped nations like Ghana, where conventional communication channels may be less efficient or accessible, the inclusion of social media into disaster and crisis management plans has proved to be priceless in improving preparedness, response, and recovery efforts (Akbar et al., 2024).

Moreover, social media engagement serves as a powerful instrument for shaping public opinion, organizing resources, and inspiring group action in reaction to crises and disasters (Moonen, 2021). Virtual hubs for information distribution, platforms including Twitter, Facebook, and WhatsApp help to enable real-time updates, citizen reporting, and peer-to--peer aid during crises (Sharma & Behl, 2022). Also, social media magnifies the voices of underprivileged groups, by supporting grassroots movements and solidarity networks that challenge traditional power systems and demand accountability from institutions and governments (Moonen, 2021). The research on how social media activism affects disaster and crisis management emphasizes the transforming power of online mobilization in improving community resilience, supporting openness, and encouraging innovation in risk communication and response coordination.

2.5 Popular Social media Platforms in Ghana

Driven by higher internet penetration and the general availability of smartphones, social media use has seen explosive rise in Ghana. The major social media platforms used in Ghana include WhatsApp, Facebook, TikTok, Telegram, Instagram, Snapchat, and Twitter. These platforms are used for communication, entertainment, business promotion, and information distribution among other things (Tetteh & Kankam, 2024). Recent statistics show that WhatsApp, with a penetration rate of 91.8%, is the most widely used social media platform in Ghana, followed by Facebook at 77.4%, TikTok at 64.9%, and Telegram at 47.8% (Tetteh & Kankam, 2024). The great use of these platforms indicates their importance in a Ghanaian daily life.

More so, depending on their main purpose and the kind of interactions they enable, social media platforms can be divided into several groups. This encompasses Social media Sites (SNS) such as

Facebook, LinkedIn, and Myspace, which enable users to build profiles, interact with friends, post updates, and participate in interest-based groups (Sharif et al., 2021). Often with a character limit, microblogging platforms (best represented by Twitter) allow users to post quick updates or messages, by facilitating the sharing of fleeting ideas, links, and multimedia content. Platforms such as YouTube, Instagram, and TikTok enable users to create, watch, and share multimedia content, including photos, videos, and music. For personal and group messaging, messaging apps (including WhatsApp, Telegram, and Facebook Messenger) offer real-time text, voice, and video messages (Sharif et al., 2021). Like Wikipedia, cooperative projects and Wikis allow users to contribute to and edit articles together, by facilitating the creation and editing of collective content. Last but not least, blogs and forums including Reddit, Blogger, and WordPress allow users to post long-form material and participate in debates, by creating venues for community interactions (Lehmann, 2023).

Recent activities on social media platforms illustrate shifting user preferences and behaviors, particularly through trends such as the growing popularity of short-form video content on platforms like TikTok and Instagram Reels. This enthralls younger audiences with interesting and easily consumable materials and influence other platforms to incorporate similar features (Lehmann, 2023). With Facebook Live, Instagram Live, and Twitch allowing real-time broadcasts and viewer interactions for uses ranging from entertainment to education and crisis communication, live-streaming has become rather popular. Short-lived content like Instagram Stories and Snapchat Snaps, which vanish quickly, encourages users to share more naturally and authentically (Tetteh & Kankam, 2024). Furthermore, the inclusion of e-commerce elements into social media platforms (best shown by Instagram Shopping and Facebook Marketplace) has

created fresh opportunities for companies to directly market goods to consumers (Ong & Toh, 2023). On platforms like Snapchat and Instagram, Augmented Reality (AR) filters have become popular and improve user involvement and inventiveness. Moreover, with messaging apps like WhatsApp and Telegram as well as private Facebook groups becoming indispensable tools for personal and community communication, people are increasingly choosing private communication and small group interactions.

Again, even if social media platforms have many advantages, they also present several security issues that need to be addressed. For instance, the fast dissemination of false news and misinformation can have major consequences, particularly during crises and disasters. With users often ignorant of the degree of data collecting and its use or sharing with third parties, these platforms collect vast amounts of personal information, leading to concerns about privacy and data protection (Shahbazi & Bunker, 2024). Furthermore, susceptible to cybersecurity concerns including hacking, phishing, and malware attacks (which could compromise user accounts and result in illegal access and data breaches) are social media platforms (Tetteh & Kankam, 2024). Online harassment and user safety are therefore major issues for platform providers since they can also be used to harass, bully, and abuse people by causing emotional and psychological damage. With platforms battling to balance freedom of expression and the need to remove damaging or inappropriate content, the great volume of user-generated content on social media makes effective monitoring and moderation challenging (Lehmann, 2023). Social media platforms also have to negotiate complicated and changing legal environments by following laws and rules on data protection, content moderation, and user rights while non-compliance could have financial and legal consequences.

2.6 Disaster and Crisis Management

Specifically, regarding the role of social media activism in enhancing disaster and crisis management, practices that include vital strategies and actions for handling emergencies, mitigating disaster impacts, and recovering from events has gotten great attention in literature (Ogie et al., 2022). Disaster and crisis management theories are commonly structured around the stages of emergency management, namely mitigation, preparedness, response, and recovery (Najafi et al., 2017). The response phase concentrates on quick actions during a disaster to ensure safety and minimize damage. The mitigating phase is on measures to lessen the severity of possible disasters. While the preparedness phase is on planning and training to handle crises effectively, and the recovery phase is on restoring normalcy and rebuilding impacted communities. Geddam and Kiran (2024) emphasized the need for timely and accurate information distribution to ensure public safety and coordinate response efforts. Effective communication is absolutely vital in disaster management. Digital platforms including social media have added to traditional means of communication like television and radio broadcasts by providing real-time updates and interactive features.

2.6.1 Impact of Social media on Disaster and Crisis Management

Social media has evolved into a necessary instrument for disaster and crisis management in recent years, and this greatly changes the way knowledge is shared, absorbed, and used during crises. The fast dissemination of knowledge which is made possible by social media, enables quick mobilization of resources and volunteers, and this is essential in reducing the effect of disasters (Ogie et al., 2022). One prominent example is the 2018 tsunami and earthquake in Sulawesi, Indonesia, where social media was crucial for disaster response. Using Twitter, survivors and

witnesses reported their whereabouts, shared pictures of the damage, and asked help, so allowing authorities and rescue teams to react more precisely (IFRC, 2019). This event made clear how social media can close communication gaps, particularly in cases when conventional channels of contact are disrupted during natural disasters.

Social media campaigning has been significant in Ghana's disaster management, especially during the Accra floods of 2019. Using Facebook and Twitter, activists and concerned citizens raised awareness of the seriousness of the crisis, coordinated resources, and pushed the government for a quick response (Inusah, 2023). These initiatives helped to coordinate responses since information on impacted was rapidly shared with pertinent parties. Again, the worldwide COVID-19 epidemic starting in 2020 underlined the need of social media in controlling public health emergencies. Social media channels were heavily used in Ghana to provide information about the virus, distribute updates on case counts, and inform the public on safety precautions (Malm et al., 2022). Working together, government agencies, health organizations, and social media activists refuted false information and guaranteed that accurate, trustworthy knowledge made its way to the public (Malik et al., 2020). This cooperation guaranteed that the public followed safety procedures and helped to slow down the virus' spread.

2.6.2 Social media Activism in Disaster and Crisis Management

By means of fast distribution, crowd-sourced data collecting, and community mobilization on platforms like Twitter, Facebook, and WhatsApp, social media has revolutionized disaster information sharing (Ogie et al., 2022). Disaster management depends much on social media activism, which is the deliberate use of social media platforms for advocacy, awareness, and action

coordination. By spreading important knowledge before, during, and following events, it raises public awareness. For real-time updates and relief coordination during the Türkiye earthquake, for example, Twitter was indispensable (Aldamen & Hacimic, 2023). With timely warnings and safety advice, social media allow governments and companies to reach more people. As observed by Hurricane Harvey in 2017, where social media was crucial in the rescue operations and resource mobilization, activism on these platforms also helps users to share experiences, offer aid, and organize volunteer efforts (Demiroz & Akbas, 2022). This group effort fills in gaps between official reaction campaigns and community needs. While crowd-sourced data offers insights outside of conventional reporting lines, platforms like Twitter provide real-time data that helps with resource allocation, damage assessment, and identification of areas needing immediate assistance.

2.6.3 Technological Advancements and Disaster Resilience

Technological developments have transformed the field of disaster and crisis management in recent years by providing fresh tools and approaches to improve resilience and lower risk (Samarakkody & Amaratunga, 2023). Authorities can use early warning systems, geographic information systems (GIS), and remote sensing tools to detect and track potential hazards in a timely manner. This enables them to implement proactive actions and evacuate at-risk populations (Samarakkody & Amaratunga, 2023). Likewise, developments in data analytics and communication help stakeholders to coordinate in real time, by simplifying response efforts and maximizing resource allocation following a crisis or disaster (Ragini et al., 2018).

Moreover, the combination of artificial intelligence (AI) and machine learning algorithms shows promise for predictive modeling and scenario analysis, by allowing legislators to foresee

developing hazards and create evidence-based risk-reducing plans (Samarakkody & Amaratunga, 2023). The fair distribution and accessibility of these technologies are most important since they guarantee that underprivileged groups and vulnerable populations gain from the defensive actions made possible by technological innovation.

2.6.4 Challenges of Social media in Disaster Management

As witnessed by the Ebola epidemic in West Africa, where false information led to public anxiety and misinterpretation of the disease, social media presents several challenges and restrictions even if it provides many advantages in disaster management. These include the spread of rumors and misinformation that might cause panic, mislead the public, and impede response efforts (Stewart et al., 2022). Maintaining public confidence and efficient disaster management depend on the accuracy of material uploaded on social media. Moreover, the digital gap shows that access to social media and the internet is not evenly distributed among all individuals. This results in the differences in information distribution and resource access. The underprivileged communities suffer most as they depend more on conventional means of communication (Charles et al., 2024). Inclusive and good disaster management depend on addressing these inequalities. Again, privacy and security issues are also major ones since sharing personal data on social media exposes people to privacy violations and cyberattacks and compromises the security of the platforms themselves. This enables illegal access and use of data (Albulayhi & El Khediri, 2022). Reducing these risks thus depends critically on strong security policies and public education on safe social media practices.

2.7 Disaster and Crisis Management in Ghana

Particularly for underdeveloped countries like Ghana, which suffer some difficulties due to economic constraints, infrastructure shortages, and vulnerability to various natural and human-made disasters, disaster and crisis management are vital areas of attention for nations all around (Mensah-Bonsu, 2022). Floods, droughts, epidemics, and industrial accidents are among the several disaster hazards Ghana faces. One of the most often occurring and destructive natural disasters is flooding, especially in cities like Accra where poor drainage systems aggravate the situation (Mensah-Bonsu, 2022). Droughts also greatly affect the northern areas, by influencing food security and agriculture (Bawa, 2019). Significant health hazards and strain on the healthcare system abound from epidemics including cholera (Apenteng et al., 2023). Historically, Ghana's approach to disaster and crisis management has been mostly reactive, emphasizing post-disaster relief and recovery over proactive risk reduction and preparedness (Sowah, 2019). Established in 1996, the main body in charge of organizing disaster response and management initiatives is the National Disaster Management Organization (NADMO). The mandate of NADMO spans disaster prevention, preparedness, response, and recovery (NADMO, 2020).

Social media activism can help to raise awareness, organize resources, and coordinate community reactions in the framework of disaster and crisis management. For instance, social media was instrumental in spreading information about impacted areas, organizing rescue operations, and managing relief donations during the 2015 Accra floods (Sowah, 2019). The COVID-19 epidemic also highlighted even more the significance of social media for crisis management. Using Twitter, Facebook, and Instagram, the Ghana Health Service and the Ministry of Information shared details on vaccination campaigns, testing facilities, and preventative policies. Social media facilitated the

establishment of virtual community support groups, enabling individuals to exchange resources and provide emotional support (Ansah, 2022). Social media offers many different advantages for handling crises and disasters. It improves real-time communication, which is essential for timely reaction and resource mobilization. It also encourages community involvement by allowing people to help one another and support relief initiatives.

2.8 Utilization of Social media in Disaster and Crisis Management

The utilization of social media in disaster and crisis management is particularly significant because it enables authorities, organizations, and individuals to respond swiftly to crises and disasters, coordinate relief efforts, and engage with affected populations (Clark et al., 2021). One of the key aspects of social media in disaster management is its role in enhancing situational awareness. Social media platforms like Twitter, Facebook, and Instagram enable individuals to post real-time information during disasters, providing critical support to emergency responders (Kankanamge et al., 2020). For instance, during the 2018 Camp Fire in California, social media platforms were extensively used to disseminate evacuation orders, locate missing persons, and provide updates on fire containment efforts. The use of hashtags like #CampFire helped in organizing information and connecting people to resources and support systems during the crisis (Yun, 2020).

Moreover, social media has been utilized for crowdsourcing crisis information (Clark et al., 2021). In the 2019 Cyclone Idai that struck Mozambique, Zimbabwe, and Malawi, local communities relied on platforms such as WhatsApp and Facebook to exchange updates about safe shelters, road conditions, and access to essential supplies like food and water. This grassroots-level information sharing complemented official communications and enabled faster, more localized responses to

the disaster (UNICEF, 2020). For instance, in Ghana, the National Disaster Management Organization (NADMO) has leveraged on Facebook and Twitter to educate the public about disaster preparedness measures, such as flood prevention during the rainy season. This proactive use of social media helps build community resilience by ensuring that people are informed and prepared before disasters strike (NADMO, 2022).

2.9 Effectiveness of Social media Activism in Information Dissemination

Social media activism has reshaped the way information is shared, especially during disasters and crisis management. With their speed, wide reach, and interactive features, these platforms serve as powerful channels for delivering vital information, mobilizing support, and organizing relief initiatives (Abdulhamid et al., 2021). From 2018 onward, several scholars have underscored the influence of social media activism in facilitating effective information sharing (Chon & Park, 2020; Cortés-Ramos et al., 2021; Weber et al., 2022). A striking example of this was seen during the 2019–2020 Australian bushfires, where platforms such as Twitter, Facebook, and Instagram played a crucial role in providing real-time updates, disseminating safety guidelines, and supporting fundraising initiatives. Hashtags like #AustraliaBushfires and #PrayForAustralia went viral, raising awareness and prompting global support (Weber et al., 2022). Social media also helped in coordinating evacuation efforts and distributing vital information on safe zones and emergency contacts. The widespread sharing of images, videos, and personal stories not only mobilized international aid but also pressured governments to take action against climate change, which was seen as a contributing factor to the fires (Zander et al., 2023).

In Ghana, social media activism was instrumental during the 2019 Accra floods, where Facebook and WhatsApp served as channels for sharing updates on impacted locations, emergency numbers, and available support services. This was particularly important in areas where traditional media channels were less accessible (Inusah, 2023). The immediacy of social media allowed for quicker responses, reducing the potential for harm. Citizens also used these platforms to hold the government accountable for the poor drainage systems that exacerbated the flooding, demonstrating how social media can serve as both a communication tool and a means of advocacy (Domalewska, 2019). The COVID-19 pandemic further underscored the importance of social media in crisis management. Across the globe, social media platforms became the primary means of disseminating information about the virus, safety protocols, and vaccination drives (Ibrahim et al., 2024). In Ghana, health organizations use platforms like Twitter and Facebook to share updates, debunk misinformation, and provide guidelines on preventing the spread of the virus. The interactive features of SM made it possible for authorities to engage with the public in real time, respond to concerns, and swiftly dispel misinformation (Malm et al., 2022).

2.10 Opportunities of Social media Activism in Disaster and Crisis Management

SM activism has transformed disaster and crisis management by offering new opportunities for rapid information dissemination, community mobilization, and real-time coordination (Ogie et al., 2022). One of the significant opportunities is the speed and reach of SM platforms, enabling the rapid spread of information to vast audiences. This immediacy is crucial in disasters and crises where timely updates can save lives. Social media platforms allowed for real-time updates and facilitated swift responses from both governmental and non-governmental organizations (Kabra et al., 2023). Moreover, SM activism provides a platform for marginalized voices, allowing affected

communities to share their experiences directly with a global audience. This empowerment can lead to increased public awareness and pressure on authorities to act (O'Byrne, 2019). In Ghana, SM was crucial during the COVID-19 pandemic for sharing health-related information and addressing misinformation. Activists used platforms like Twitter to share accurate information about safety protocols and vaccination, which was crucial in managing public health crises (Brackstone et al., 2022). Social media also fosters collaboration and partnerships across different sectors. During the 2020 #EndSARS protests in Nigeria, which had ripple effects in Ghana, social media activism helped bring together civil society organizations, the private sector, and international bodies to support the movement against police brutality. This collaboration extended to disaster management, where organizations used social media to raise funds and resources for affected communities (Ch et al., 2021). Such partnerships demonstrate the potential of SM activism to unite diverse stakeholders in crisis management efforts.

Another opportunity lies in the use of SM data for disaster prediction and response. The analysis of SM posts can provide insights into public sentiment, the spread of misinformation, and emerging crisis hotspots (Acikara et al., 2023). For instance, during the 2019 cholera outbreak in Accra, health authorities monitored social media discussions to track the spread of the disease and address public concerns promptly (Owusu et al., 2023). This use of SM data can enhance the effectiveness of disaster management strategies by providing real-time information on evolving situations. Social media activism also contributes to accountability and transparency in disaster management. Platforms like Twitter and Facebook enable citizens to hold authorities accountable by publicly sharing their experiences and concerns (Ogie et al., 2022). During the 2020 floods in the North of Ghana, affected communities used social media to highlight the lack of government

response, prompting swift action from local authorities (Kelly & Addo, 2023). This direct line of communication between citizens and decision-makers enhances the transparency and responsiveness of disaster management efforts.

2.11 Challenges of Social media Activism in Disaster and Crisis Management

SM activism has revolutionized how individuals and organizations respond to disasters and crises by facilitating rapid information dissemination, mobilization of resources, and real-time coordination. However, its application in disaster and crisis management is not without significant challenges. These difficulties make it harder to effectively utilize SM in disaster relief and response (Shaw et al., 2021). A major concern in SM activism during emergencies is the circulation of false or misleading information. Because platforms like Facebook, Twitter, and WhatsApp are open and widely accessible, unverified content can spread quickly, leading to fear, confusion, and disruptions to official rescue operations (Babu, 2022). During the 2019 Cyclone Idai disaster in Mozambique and Zimbabwe, unverified reports about rescue operations misled the public, causing further distress and complicating government efforts to mobilize resources effectively (UNHCR, 2019). Similarly, the COVID-19 pandemic highlighted how misinformation about treatments, vaccines, and the virus spread widely across social media, influencing public perception and undermining health interventions (Skafle et al., 2022).

Another major challenge is the difficulty of regulating user-generated content. Social media platforms are designed to prioritize free speech and decentralized communication, making it difficult for authorities and platform owners to monitor and control harmful or inappropriate content in real-time. With millions of posts being made every minute, identifying and removing

posts that can spread panic or promote violence during crises remains a daunting task (Rahman, 2024). For instance, during the 2020 Beirut Port explosion, videos and images of the explosion spread rapidly, some of which were inaccurate or graphic, heightening public fear and making it difficult for authorities to maintain control over the flow of information (Mansour & Sleiman, 2020). The sheer volume of information generated on SM during a disaster or crisis is often overwhelming. With thousands of posts appearing every second, it becomes difficult for disaster response teams to sift through the noise and identify critical information. This volume can delay decision-making processes, as critical data may be buried under irrelevant or duplicate content (Clark et al., 2021). The 2018 Sulawesi earthquake and tsunami in Indonesia revealed how the overwhelming number of tweets, posts, and images made it challenging for rescue teams to prioritize the most urgent needs for aid and evacuation (Aspi, 2018).

Social media activism also raises significant security and privacy concerns. The need to share information quickly can lead users to divulge personal information without fully considering the potential consequences (Hodzi & Zihnioğlu, 2024). This has been particularly problematic during crises where individuals seeking help may unintentionally share sensitive data that could be exploited by malicious actors. During the 2020 Nigerian #EndSARS protests against police brutality, activists reported cases where personal data was leaked or misused, leading to threats and harassment. In regions where access to reliable internet infrastructure is limited or where digital literacy levels are low, the effectiveness of social media activism is hindered. Many rural areas in developing countries like Ghana lack the necessary internet connectivity for robust social media engagement during disasters (Ekoh & George, 2021). Furthermore, even when internet

access is available, a lack of digital literacy can prevent individuals from fully utilizing social media tools for crisis communication and activism.

2.12 Empirical Review of Related Studies

2.12.1 The role and Challenges of SM in Enhancing Crisis Management and Community Engagement

Social media offers a forum for real-time communication, situational awareness, and community involvement, and this has made it ever more important for disaster and crisis management. Luna and Pennock (2018) underlined how social media greatly improves situational awareness and faster information distribution, thus improving emergency management. Although its full potential is hampered by problems including interoperability concerns, public misinterpretation, and the lack of standardized procedures. Kankanamge et al. (2020) also expanded this knowledge by showing that, social media posts especially those with images and maps engage communities effectively during disasters, but the full potential of social media is underused and more data-intensive practices are needed to improve outcomes. Again, Ganoe et al. (2023) underlined the part social media plays in encouraging volunteerism during crises, particularly driven by altruism and empathy in Indonesia, but they also demand more study on the integration of developing technologies and inclusivity in disaster response. While this increases crisis awareness, Kurniawan and Tambunan (2023) further investigated how social media affects Business Continuity Management (BCM), noting that its influence on actual BCM implementation is still limited. Likewise, Caridà et al. (2022) investigated how social media drives social innovation in Italy and proposes that more validation of its influence is needed in several spheres. These findings as specified in Table 2.1 showed how strongly social media is used in disaster management and underline the need to address current issues, including underutilization of data-driven practices,

lack of standards, and gaps in knowledge of developing technologies and inclusivity. These problems are still crucial for optimizing social media's performance in handling crises.

2.12.2 Expanding Role of SM in Crisis Management and Beyond

Beyond information sharing, social media's influence on disaster and crisis management touches on many interconnected areas, including volunteerism, corporate continuity, political involvement, and social innovation. For instance, Abdulhamid et al. (2021) underlined the difficulties in combining digital volunteers with conventional humanitarian activities and proposed that tools like Google Person Finder (GPF) would help to coordinate and respond better. Emphasizing the careful balance between empowerment and use in crises, Gustafsson and Weinryb (2020) investigated the democratic potential of digital participation in Sweden but also warned of its ripple effects. Also, Frimpong et al. (2022) showed that, in Ghana, social media improves political involvement, especially during elections, but they underlined the need for more research of cultural and social dynamics in forming voter behavior. Stressing on the need for social medias in crisis management, Abboodi et al. (2023) suggested looking at how Artificial Intelligence (AI) might improve crisis response plans. Again, Ghosh et al. (2018) demanded better integration of data streams for better decision-making after highlighting the technological difficulties of extracting actionable information from many social media sources during disasters. Last but not least, Malm et al. (2022) also discovered no appreciable gender variations in social media-induced fear during the COVID-19 epidemic, implying a need for more in-depth psychological research by contrasting anxiety levels before and post-epidemic. These findings as specified below (Table 2.2), highlighted the complex function of SM in crisis management, stressing on both its possibilities and the continuous difficulties requiring more research.

2.12.3 The Role of SM in Crisis Management and Civic Engagement

Across various contexts, SM has proven to be an effective medium for civic engagement and managing crises. Studies have shown how well it works for public involvement, information distribution, and emergency communication enhancement. Using celebrity endorsements and infographics, Malik et al. (2020) demonstrated how health organizations effectively engaged the public on Instagram during COVID-19, and highlighted the possibilities of multi-platform strategies in improving public health communication. Encouraging more study on social media applicability across many issues, Chon and Park (2020) presented a model showing that issue-driven motivations can increase both online and offline activism. Also, Domalewska (2019) highlighted social media's part in Poland's 2019 floods and urged more research on how crisis communication might get politicized. Emphasizing financial obstacles as one of the major challenges for NGOs using social media in disaster preparedness, Kabra et al. (2023) underlined a need for resource allocation.

Furthermore, pointing out platform-specific strengths, Ibrahim et al. (2024) observed that Facebook followed crisis communication guidelines more closely than Instagram during the COVID-19 epidemic. Finally, Opeibi (2019) demonstrated how X (formerly Twitter) can encourage civic engagement during election campaigns in Nigeria, emphasizing the role of SM in political participation. The study also underscored Twitter's socio-communicative features and its use as a campaign tool for mobilizing support and persuading voters within an emerging democracy. The findings from these studies imply that, although social media is a useful tool for disaster and crisis management, its efficacy is affected by several elements, including platform

choice, financial resources, and political settings, so requiring customized strategies for best impact as shown in Table 2.3.

2.12.4 Role of SM in Crisis Management and Governance

Crisis management institutions and governments in Ghana are benefiting much from social media activism. Saah et al. (2023) highlight the growing recognition by government bodies, such as Ghana's Public Records and Archives Administration Department (PRAAD), of the benefits that SM offers for crisis management. To fully grasp the difficulties of using social media for such goals, they underlined the need for more quantitative research to be done. Also, Oppong et al. (2022) reflected on this as their analysis of Facebook's influence in crisis management shows that although most of the respondents see Facebook as a useful tool, a minority still has worries, especially about its usage in educational environments. This implies that more study is necessary to confirm Facebook's capacity as a crisis management tool. Mensah-Bonsu (2022) emphasized in terms of disaster risk reduction the need for proactive policymaking and the part the National Disaster Management Organization (NADMO) plays in improving disaster preparedness. He contends that since social media activism is becoming more and more important, institutions like NADMO have to include social media in their crisis management plans and disaster readiness to increase resilience. The literature reviewed indicates that there is an increasing possibility of SM to enhance governance and crisis management, as well as the need for more thorough research and policy development to overcome the current difficulties, as shown in Table 2.4.

Table 2.1: Review of Literature

Authors	Study Focus	Underpinning theory and framework	Research method/Setting	Findings	Relevant gaps for future research
Oppong et al. (2022)	The study sought to ascertain the knowledge respondents have on the use of Facebook, and the challenges they encounter, in managing and responding to fire outbreaks.	N/A	Mixed Method Ghana	Generally, 88.9 % were of the view that the use of Facebook did not pose any challenge in managing the crisis while 11.1 % of the respondents thought it posed some challenges.	The gap in this study is the limited exploration of underlying factors that might contribute to the perception of Facebook as a challenge-free tool in crisis management. While the study quantifies user perceptions, it does not examine whether this lack of reported challenges reflects actual system robustness or merely a lack of awareness of latent issues.
Luna and Pennock (2018)	To gain deeper insight into the advantages and limitations of using social media in emergency management.	N/A	Literature review USA	The study's findings highlighted several advantages, including improved situational awareness, quicker dissemination of information, enhanced monitoring of	The study does not explore the underlying factors contributing to interoperability issues, stakeholder stratification, and absence of regulatory standards. Additional research is required to address these gaps and improve social media implementation in crisis contexts.

				activities, and better coordination among stakeholders. However, it also identified challenges, such as interoperability problems, public misinterpretation and spread of rumors, stakeholder fragmentation, and a lack of standardized regulations governing their use.	
Kankanamge et al. (2020)	The study concentrates on the extent of engagement with social media platforms related to disaster management.	N/A	Case Study Australia	The findings indicated that: (a) Social media serves as a valuable tool for gathering widespread community knowledge on disaster management, although its use remains limited;	Despite demonstrating that social media posts with visual enhancements boost engagement and situational awareness, the study does not investigate the underlying factors hindering utilization of these channels, nor does it explore strategies for integrating social media practices into formal disaster management

				(b) Sharing posts that include images and animated maps boosts community engagement; and (c) Posts designed to enhance situational awareness tend to attract more attention from the community compared to other types of posts.	protocols. Further research is needed to address these gaps.
Ganoe et al. (2023)	The research thoroughly examines what drives volunteers to participate, how effective they are in responding to disasters, and the broader impacts of their engagement.	N/A	Mixed Method Indonesia	Volunteer motivations include altruism, personal disaster experience, duty, and empathy. Volunteers effectively assist in disaster response and recovery, especially those with specialized skills (78% community, 85% professionals). Communities benefit from	Although the study explored volunteer motivations and disaster response effectiveness, the study does not address long-term sustainability of volunteer engagement or adequately evaluate how policy interventions could enhance coordination and training. Further research should examine strategies to integrate volunteer efforts into formal disaster management frameworks for enduring resilience.

				improved well-being, resilience, infrastructure repair, and economic recovery. Effective coordination and training are essential.	
Saah et al. (2023)	To explore the PRAAD's readiness to adopt social media and the challenges faced in doing so.	Electronic Data Interchange Adoption Model	Qualitative Ghana	Majority of the participants appeared to have a strong awareness of the advantages of social media. As a result, they maintained that the adoption and effective use of social media would benefit Ghanaian public archives immensely in their efforts to communicate with the public, disseminate information, and publicize their collections.	The study revealed high awareness and anticipated benefits of social media adoption for Ghanaian public archives, but the study does not examine the operational challenges, resource constraints, and implementation strategies required for effective integration. Further research should evaluate actual adoption outcomes and identify best practices for sustainable utilization.

Kurniawan and Tambunan (2023)	To investigate how social media and crisis awareness influence the implementation of business continuity management, as well as to assess the effect of BCM on the sustainable performance of companies.	N/A	Quantitative Indonesia	This study indicates that social media usage has a significant and positive effect on employees' crisis awareness. Additionally, crisis awareness significantly influences the implementation of Business Continuity Management (BCM), which in turn has a significant impact on sustainable performance. However, the findings also reveal that social media usage does not have a significant direct effect on BCM implementation.	The study revealed that social media significantly boosts crisis awareness, which in turn drives effective BCM implementation and sustainable performance, and found no significant direct effect of social media on BCM. The study failed to explore potential moderating factors and contextual influences adequately elucidating this incongruence.

Caridà et al. (2022)	This study explores how digital platforms foster the development of successful social innovation practices to improve the process of social change and well-being.	N/A	Qualitative and Case study approach Italy	The results were structured around the key aspects of social innovation discussed in the literature review: originality, practical application, impact, addressing social needs, and strengthening society's ability to take action.	While the study effectively organizes social innovation practices by key elements, it does not examine the barriers digital platforms face in less digitally integrated communities, nor does it assess the long-term sustainability and potential negative consequences of relying on digital platforms for social change, limiting its applicability.
Mensah-Bonsu (2022)	The research primarily concentrated on disaster risk mitigation efforts in Ghana.	N/A		The study found that policymakers and local government authorities can strengthen the physical environment's resilience to disasters by implementing proactive measures, including urban planning, land-use management, and building regulations.	Although the study demonstrated that policymakers and local officials can enhance disaster resilience through proactive measures, it failed to examine the practical effectiveness and implementation challenges of these policies, including stakeholder engagement and technological integration, thereby limiting insights into long-term community resilience and adaptive capacity across diverse local contexts.

Abdulhamid et al. (2021)	The study focused on the concept of digital volunteerism as an offshoot of crowdsourcing initiatives.	N/A	Literature review Africa	The review indicates that earlier research neglected the interaction challenges between formal and traditional aid organizations and digital humanitarian actors.	While the study highlighted interfacing challenges between formal/traditional aid agencies and digital humanitarians, it leaves unexplored how these challenges affect operational efficiency and collaboration during disaster response. Future research should examine strategies for better integration and coordination between digital volunteerism and conventional humanitarian aid structures more comprehensively.
Gustafsson and Weinryb (2020)	The research examined how personalized digital interaction aligns with the libertarian foundations of techno-utopian thought.	N/A	Sweden	The results indicate that digital engagement offers democratic avenues for protest and civic debate, but the instability of the personalized charismatic authority it fosters can potentially undermine democratic	The study revealed that digital enthusiasm fosters democratic engagement, but failed to explore strategies to mitigate the potential risks posed by individualized charismatic authority to democratic procedures and bureaucratic structures. Further research should examine balancing mechanisms and institutional safeguards to reconcile digital activism

				processes and adherence to bureaucratic norms.	with stable democratic governance.
Frimpong et al. (2022)	Investigated how social media affects general voting patterns.		Quantitative Ghana	The results indicate that increased political engagement on social media is more likely to motivate individuals to participate in the political process.	The study demonstrated that increased political use of social media enhances voter participation and political mobilization, but it fails to examine underlying mechanisms driving this effect, the influence of socio-demographic differences, and long-term implications for democratic processes and political engagement in Ghana and broader societal impacts.
Amenyeawu (2021)	The primary discussion centers on the contemporary utilization of social media in Ghanaian political campaigns and its effectiveness as a communication tool.	Participatory Democratic Theory	Mixed Method	The results indicated that social media has become a part of Ghanaian politics, leading to greater involvement of political stakeholders.	The study demonstrated that social media integrates into Ghanaian political campaigns and boosts stakeholder engagement. However, the study overlooks negative impacts, like misinformation, political polarization, and the digital divide. Future research should investigate these limitations to offer a balanced understanding of

					social media's political influence in Ghana.
Mahama (2020)	This qualitative case study aimed to examine ways in which the government could utilize social media technologies in its policy communications to close the information gap.	Narrative Policy Framework	Qualitative	The findings showed that limited access to policy information influenced the selection of communication channels.	The study shows that insufficient access to policy information determines the choice of communication channels, but it does not address how digital literacy, infrastructural constraints, and resource limitations affect social media integration. Future research should explore these factors to provide a holistic understanding of effective government communication more comprehensively
Inusah (2023)	Concentrated on how social media activism contributes to promoting adequate water and sanitation in Ghana.	Social Movement Impact Theory	Qualitative Ghana	Activists leverage social media to (1) advocate for improved access and equity, (2) encourage collective responsibility, (3) promote better governance, (4) mobilize support and resources, (5)	The study effectively categorizes the roles of social media activism in advocating for improved water and sanitation in Ghana. However, it did not empirically measure the tangible outcomes of these digital initiatives and does not address barriers or enablers to their long-term sustainability, scalability,

				protest against national irregularities, (6) condemn corruption, and (7) influence public attitudes in their efforts to ensure proper water and sanitation in Ghana.	and integration with formal governance mechanisms.
Abboodi et al. (2023)	Aimed at identifying the current body of knowledge on the adoption of Social medias in crisis management.	N/A	Qualitative Australia	The review indicated a potentially critical role for Social medias in a context of crisis, as demonstrated by a tangible and measurable increase in their adoption in real-world situations, including local and global crises.	Although the study demonstrated an increase in social media adoption during crises, its review does not explore the contextual factors affecting integration, nor does it address the challenges in standardizing crisis response practices or the overall effectiveness of these platforms. Future research should empirically evaluate these critical dimensions.
Dekalu (2016)	The study aimed to explore how social media contributes to mobilizing and organizing	Technological Determinism Theory	Quantitative Ghana	A major finding indicated that certain citizens use social media platforms to express their	The study revealed social media's efficient mobilization of citizens and alignment of sentiments in civic activism. However, the study does not explore

	individuals for demonstrations, a central aspect of civic activism in Ghana.			opinions and align themselves with the views of demonstrators. Another finding showed that social media provides a quicker, more cost-effective, convenient, and efficient method for organizing people in civic activism.	how these mobilizations translate into sustained political engagement. Future research should examine the effectiveness and risks of digital mobilization strategies in Ghana for a significantly lasting societal impact.
Opeibi (2019)	The research examines the increasing recognition of Twitter's role in election campaigns and civic participation from 2012 to 2015.	Computer-Mediated Communication (CMC) and Computer-Mediated Discourse Analysis (CMDA)	Qualitative Nigeria	Consequently, the study underscores the social aspects of politics and the communicative functions of Twitter as a tool for rallying support and attracting voters in a developing democratic context.	While the study revealed Twitter's role as a dynamic tool for election campaigns and civic engagement, it overlooks the long-term impact of Twitter-driven mobilization on voter behavior and democratic outcomes, as well as the influence of evolving platform algorithms on political discourse in emerging democracies, warranting further investigation.

Ghosh et al. (2018)	The focus was to present a platform for dissemination of the empirical results of various technologies for extracting vital and actionable information from social media content in disaster situations.	N/A	Qualitative Europe	The finding shows that, the papers included in the issue are the stepping stones for future explorations and technical innovations towards technologies meant for utilizing various online and offline information sources for enhancing pre-disaster preparedness and post-disaster relief operations.	The study does not empirically evaluate the real-time operational integration, scalability, or practical effectiveness of these technologies in live disaster scenarios, leaving critical implementation challenges unaddressed.
Lam et al. (2023)	This study presents a framework for analyzing social media and disaster resilience by classifying different types of social media usage and the associated	N/A	Case study USA	The research suggests twenty strategies that can be adopted by the four main stakeholders in the social media ecosystem (organizations, individuals, social media platforms, and researchers)	The study's framework lacks empirical validation and fails to examine the contextual factors influencing strategy adoption. Further research should comprehensively assess the practical implementation, scalability, and long-term effectiveness of these strategies across diverse disaster scenarios.

	challenges, aiming to provide a clearer understanding of its role in disaster resilience research and management.			to enhance social media utilization and strengthen disaster resilience.	
Adjin-Tettey (2022)	This study examined how media and information literacy (MIL) influences individuals' ability to recognize fake news, disinformation, and misinformation, as well as their intentions to share such content.	N/A	Quantitative	Results indicated that participants who received MIL training were better able to assess the accuracy of information and were less inclined to disseminate false content.	However, the research did not explore the long-term retention of MIL skills, the most effective training methods, or how outcomes may vary across different demographic groups, highlighting the need for further in-depth investigation.
Gadjanova et al. (2022)	The research examined how social, traditional, and grassroots media create a complex media landscape	N/A	Quantitative Ghana	The results indicated that strategies to counter misinformation must go beyond Western-centric	The study does not examine the effectiveness of fact-checking practices or the integration of indigenous media forms into broader misinformation counterstrategies. Future

	that is heavily influenced by gender and socio-economic factors, and explored how this affects the ways in which citizens encounter, interpret, and react to misinformation.			definitions of media and consider the various local forms of media access and approaches to fact-checking.	research should explore these dimensions.
Demuyakor and Doe (2022)	The study examined the effects of social media utilization and its likely effects on democracy and the freedom of expression among the citizens in Ghana.	N/A	Qualitative Ghana	The finding suggested that, social media platforms have strongly safeguarded and consolidated the democratic dispensation within Ghana.	The study neglects potential adverse effects like polarization, echo chambers, and misinformation that could undermine pluralistic discourse. Further research must examine these risks to provide a comprehensive understanding of social media's role in democratic processes.
Malm et al. (2022)	The study examined Ghanaian students' social media use and its relationship with fear of COVID-19,	N/A	Quantitative Ghana	Findings revealed that the mean scores of social media use and fear of COVID-19 did not statistically differ by gender.	The study did not explore additional moderating variables and underlying psychological mechanisms. Future research should examine contextual and behavioral determinants to fully understand social

	paying close attention to the moderating role of gender.				media's nuanced impact during pandemics.
Malik et al. (2020)	The research explored how prominent health organizations utilized Instagram to communicate and interact with the public during the COVID-19 pandemic.	N/A	Quantitative USA	Among the organizations analyzed, the CDC and WHO demonstrated the highest activity in terms of post frequency, audience reach, and engagement metrics. The majority of their content focused on personal prevention and mitigation strategies, general advisories, vigilance, and messages of gratitude and resilience. Posts featuring celebrities, clarifications, and infographics received notably	Although the study revealed that leading health organizations such as the CDC and WHO effectively leverage Instagram during COVID-19, it did not investigate the long-term impact of these communication strategies, differential engagement outcomes among demographic groups, and the overall effectiveness of less prominent agencies on public behavior.

				high levels of engagement.	
Chon and Park (2020)	This study aimed to develop a comprehensive model of activism that illustrates the reasons and mechanisms behind individuals' engagement with contentious issues in a networked society.	Situational Theory of Problem Solving (STOPS)	Quantitative USA	Findings suggest that people are more inclined to take part in both social media and offline activism when they feel motivated about a particular issue.	The study overlooked external influences such as media framing, institutional policies, and cultural contexts that may moderate activism. Future research should investigate these factors to understand the dynamics of contentious issue engagement.
Cortés-Ramos et al. (2021)	This study aimed to examine the online engagement of young people in social activism, focusing on their platform preferences, key themes, language use, and the effects they	N/A	Qualitative Switzerland	The coding process revealed multiple themes, such as preferred technological devices and social media platforms, involvement in social movements or activism, perceived level of engagement, areas	The study identified multiple themes regarding young people's online social activism experiences, however, it does not quantify the impact of these experiences on actual civic engagement or policy change, nor does it examine how demographic or cultural differences moderate these themes.

	perceive from their participation.			of interest, reasons for participating, social media language practices, and personal beliefs.	Future research should address these limitations.
Domalewska (2019)	The study concentrated on examining how social media platforms, specifically Facebook and Twitter, were utilized during the flooding events in Poland in May 2019.	N/A	Mixed-method Poland	During emergencies, social media serves multiple functions for different stakeholders: emergency services use it to disseminate weather warnings and provide real-time updates; authorities share alerts and guidance; news organizations report the latest information; individuals use it to connect, share personal experiences, and voice political opinions; while organizations post	The study did not evaluate the effectiveness of communications on emergency response outcomes and disaster resilience, nor does it investigate challenges related to information verification and long-term impact on public safety adequately.

				general commentary, situational updates, and political statements.	
Ibrahim et al. (2024)	This study seeks to explore the strategies and utilization of social media by the University of Malaya Medical Centre (UMMC) in Kuala Lumpur, Malaysia, for crisis communication during the COVID-19 pandemic.	Crisis and Emergency Risk Communication (CERC)	Qualitative Malaysia	The findings indicated that Facebook adhered more closely to the messaging principles of the CERC framework than Instagram.	The study did not investigate the underlying factors driving the disparity and fails to assess the impact on public behavior and crisis outcomes, indicating a need for further research.
Kabra et al. (2023)	This study explores the obstacles and potential strategies for enhancing social media use (SMU) by NGOs during the disaster	Situation, Actor, Process-Learning, Action, Performance (SAP-LAP) framework, Technology-Organization-Environment (TOE), and	Qualitative India	The results reveal six primary barriers (human, organizational (operational, financial, and strategic), technological, and environmental) comprised of 24 interconnected	The study does not examine the longitudinal effectiveness of proposed solutions or account for regional and organizational variations. Future research should investigate context-specific strategies and evaluate the sustainability of interventions.

	preparedness phase (DPP).	Human-Organization-Technology (HOT) frameworks.		sub-barriers that affect SMU. Moreover, financial constraints emerge as the most significant barrier, followed by strategic, technological, human, environmental, and operational challenges in the use of social media by NGOs.	

Several theoretical and conceptual frameworks have been adapted or employed as the foundation for numerous studies (See Table 2.5). However, many studies lacked an applicable theory or concept, which may be attributed to the relatively emerging nature of research on the impact of social media activism, particularly in the context of disaster and crisis management in Ghana. In addition, majority of the research is centered on the role social media plays during disasters and crises. Several themes were developed from these studies including, role and challenges of SM in enhancing crisis management and community engagement, expanding role of SM in crisis management and beyond, role of SM in crisis management and civic engagement, and the growing role of SM in crisis management and governance.

2.13 Research Gaps and Directions for Future research

Literature reviewed for this study revealed significant contributions of social media but also reveals critical gaps that warrant further exploration. First, extant research on social media activism has largely concentrated on communication to spread knowledge (Bukar, Jabar, et al., 2022; Inusah, 2023; Nartey & Yu, 2023; Zander et al., 2023). This has created a dearth of research on the impact of social media activism on disaster and crisis management (Mensah-Bonsu, 2022). Moreover, prior research has largely focused on social media's function in disseminating information during crises, leaving a gap in understanding how social media activism can affect decision-making, resource mobilization, and the overall effectiveness of crisis response strategies (Caridà et al., 2022; Ganoe et al., 2023; Kankanamge et al., 2020; Kurniawan & Tambunan, 2023; Oppong et al., 2022). In these studies, social media is primarily viewed as a tool for information sharing. Therefore, future research should investigate the direct and measurable effects of social

media activism on disaster and crisis management outcomes, moving beyond mere information dissemination.

Additionally, studies on SM activism in disaster and crisis management show that much of the research has concentrated mainly on reviewing and summarizing existing literature. Notable contributions include those by (Cortés-Ramos et al., 2021; Demuyakor & Doe, 2022; Domalewska, 2019; Gadjanova et al., 2022; Lam et al., 2023; Malik et al., 2020; Malm et al., 2022) who have highlighted the potential and limitations of social media in fostering situational awareness, stakeholder engagement, and information diffusion during crises. However, they emphasized the need for more empirical studies employing diverse methodological approaches to deepen the understanding of social media's role in activism. This call aims to bridge gaps in knowledge, and develop frameworks that align with specific socio-cultural and technological settings.

Finally, literature on social media activism revealed a significant gap in research within developing country contexts, particularly in Sub-Saharan Africa and specifically in Ghana. This gap is highlighted by the works of (Clark et al., 2021; George et al., 2023), who emphasized the need for more studies to explore the impact of SM activism in African countries. This underscored the importance of understanding how social media shapes public discourse, influences societal behaviors, and impacts decision-making processes in unique socio-political and cultural environments such as those found in Ghana and the broader African context.

2.14 Chapter Summary

This chapter reviewed literature on SM, related concepts, popular SM platforms, disaster and crisis management, and empirical study. In addition, literature review found many study gaps on social media research that remain unanswered.

CHAPTER THREE

THEORETICAL FRAMEWORK

3.1 Chapter Overview

The previous discussions in Chapter Two centered on a review of relevant literature concerning social media, widely used social media platforms, disaster and crisis management, and empirical studies in the field. This chapter, however, focuses on the formulation of the research hypotheses and the development of the research model employed in this study. Additionally, from a theoretical perspective, the study adopts the Information Success Theory/Model proposed by Delone and McLean (1992), as it provides a suitable framework for evaluating the impact of social media activism on disaster and crisis management in Ghana.

3.2 Information System Success Model

Davis (1986) Technology Acceptance Model (TAM) builds on Fishbein and Ajzen (1975) Theory of Reasoned Action and Planned Behavior. Nevertheless, acceptance does not equate to success. To address this, DeLone and Mclean (1992) proposed a framework for evaluating Information Systems (IS) success, highlighting six key components: system quality, information quality, use, user satisfaction, individual impact, and organizational impact. These components are interconnected rather than separate measures, underscoring the complexity and interdependence involved in assessing IS success. The original IS success model is illustrated below (Figure 3.1).

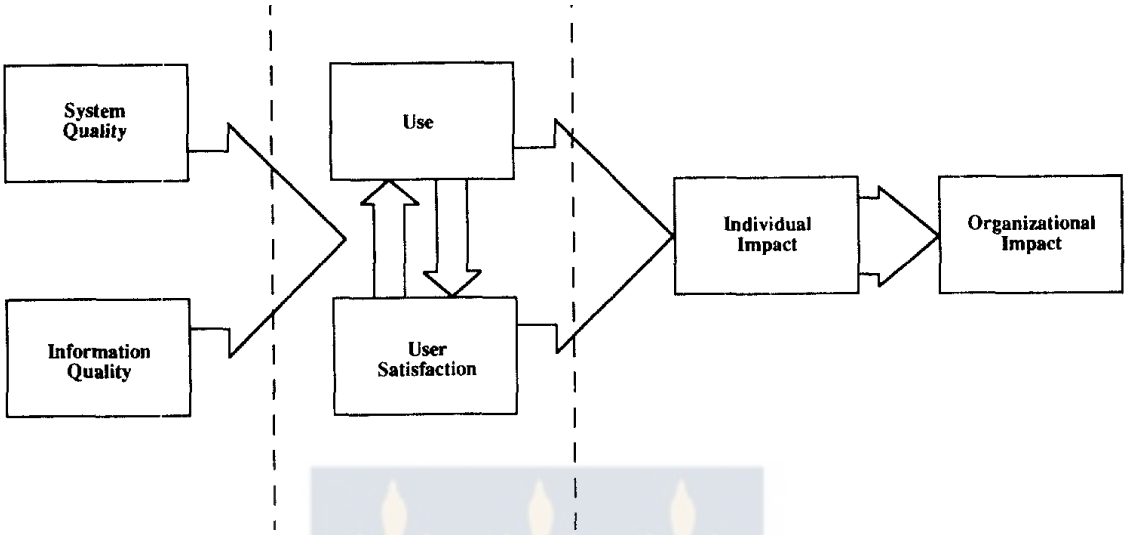

Figure 3.1: Delone and Mclean (1992)

Information System scholars have suggested changes to the Delone and McLean success model, focusing on '*Usefulness'* rather than '*Use'*. Seddon and Kiew (1996) adjusted the construct of *Use* in their evaluation, contending that when system use is mandatory, "Usefulness" serves as a more reliable measure of IS performance than mere "Use". DeLone and McLean (2003) argued that variability in '*Use'* should be preserved, as there can be significant heterogeneity in *Use* even in mandated systems. Scholars recommend extending the DeLone and McLean model to incorporate service quality, reflecting the widespread use of the SERVQUAL instrument in information systems success research (Rulinawaty et al., 2024; Wider et al., 2024). *SERVQUAL* compares user expectations and perceptions of IT departments to assess service quality (Valenzo-Jiménez et al., 2019). Pitt et al. (1995) recommended this inclusion, but some scholars have supported it. Jian et al. (2002) and others like Seddon (1997) have opposed it by arguing that service quality is distinct from the primary objective of the DeLone and McLean model, which focuses on evaluating the performance of information systems rather than the supplementary services that support them

(Rulinawaty et al., 2024). DeLone and McLean (2003) revised the IS success model to include service quality, citing changes in IS function over the last decade.

Seddon (1997) criticized the D&M model for integrating variance and process models into one framework, arguing it was misleading. DeLone and McLean (2003) disagreed, stating it was an advantage as the insights provided by these models were more comprehensive. Seddon (1997) also highlighted the unclear concept of usage and proposed three interpretations for the *Use* construct. The DeLone and McLean model, designed to be thorough and parsimonious, was modified by Seddon (1997), making it more complex and less useful (Alotaibi & Alshahrani, 2022). Apart from Seddon (1997) suggested improvements, there have been other proposals to update or expand the model (Gonzales & Wareham, 2019). It has been adapted by certain studies to assess the effectiveness of particular applications, like e-commerce (DeLone & McLean, 2016) and knowledge management (Wang & Yang, 2016). Regarding the model, several scholars have offered more comprehensive proposals (Naqbi, 2024; Rulinawaty et al., 2024). Acknowledging these suggested alterations to their model, Delone and McLean, in a subsequent study, examined empirical research conducted after 1992 and adjusted the initial model appropriately (DeLone & McLean, 2003). The updated model is shown below (Figure 3.2).

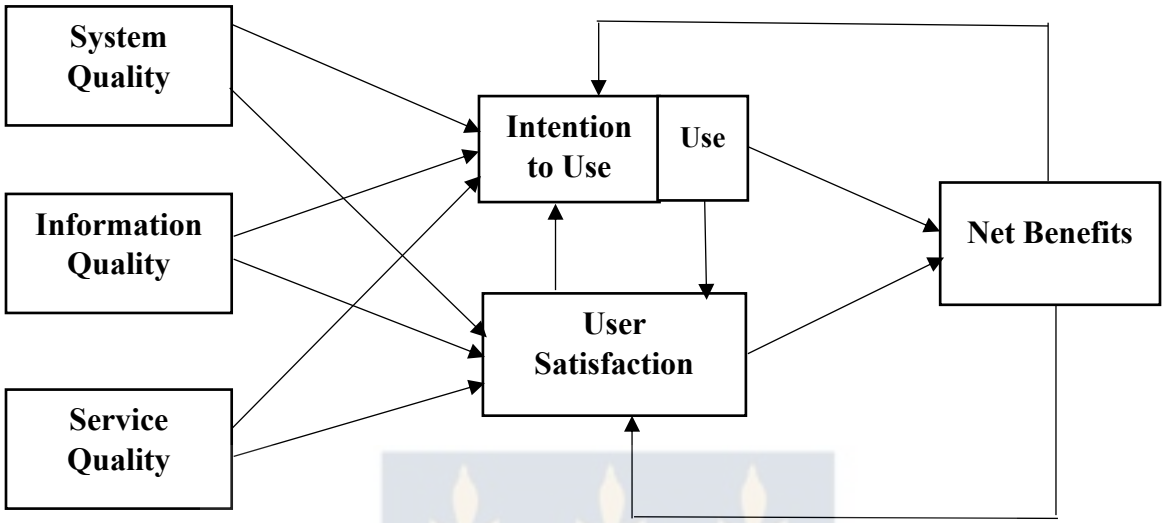

Figure 3.2 Updated Delone and Mclean IS Success Model, (2003).

The updated IS success model includes service quality as a key construct, reflecting the view that information systems can influence outcomes extending beyond individual and organizational levels. The model now accounts for advantages at various levels of analysis by substituting net benefits for variables, individual impact, and organizational effect (Lutfi et al., 2022; Rulinawaty et al., 2024). The revised Delone and McLean model clarifies the use construct, stating that positive experience with "use" leads to increased "user pleasure" in a causal sense. Better levels of user happiness increase intentions to use, which in turn affects actual use (Veroni ka et al., 2025). The D&M model provides a foundation for organizing IS success metrics, and Information Systems researchers have extensively used it to understand and quantify elements of IS success. Every variable describing an information system's success aligns with at least one of the updated model's six main success dimensions.

The dimensions of success in information system include:

System quality – the desirable characteristics of an information system. For example: ease of use, system flexibility, system reliability, and ease of learning, as well as system features of intuitiveness, sophistication, flexibility, and response times.

Information quality – refers to the essential attributes of web pages and management reports generated by the system. Key aspects include timeliness, relevance, clarity, accuracy, brevity, completeness, and overall usability.

Service quality – relates to the level of support delivered by the IS unit and IT staff to system users. This encompasses responsiveness, reliability, accuracy, technical expertise, and empathy. A commonly applied tool for assessing IS service quality is SERVQUAL, which originates from marketing and has been adapted for this purpose (Wider et al., 2024).

System use – describes how extensively and in what ways staff and clients engage with the functions of an information system. This can be assessed through factors such as frequency, intensity, type, appropriateness, scope, and use objectives.

User satisfaction – indicates the degree to which users are content with system outputs such as reports, websites, and related support services. One of the most recognized instruments for evaluating user information satisfaction is discussed in Du et al. (2022).

Net benefits – measure the overall contributions of information systems to the performance and success of individuals, organizations, sectors, and even nations. These may include enhanced decision-making, greater efficiency, cost savings, revenue growth, profit improvements, market effectiveness, consumer benefits, job creation, and economic advancement.

3.2.1 Relevance of the theory

The information system success model is an important theoretical lens for evaluating the effectiveness and impact of social media activism in disaster and crisis management. It emphasizes six core dimensions, including system quality, information quality, service quality, use, user satisfaction, and net benefits, which together measure the success of an information system. Within this research, the ISSM is particularly relevant as it enables a structured assessment of how effectively social media platforms function as information systems in times of crisis.

Firstly, *System Quality* helps assess the reliability, ease of use, and functionality of social media platforms in sharing disaster-related information. Empirical studies affirm that platforms like Facebook, WhatsApp, and X are particularly valued during crises for their ease of use, real-time updates, and mobile compatibility, which are essential for sharing and accessing emergency information quickly (Selerio et al., 2022; Urbanelli et al., 2024). For instance, during the 2020 Beirut port explosion, platforms with high system quality were more frequently used for self-help coordination and rescue operations (Hajjar et al., 2021). *Information Quality* is essential to determine the relevance, accuracy, and timeliness of data disseminated through these platforms. For instance, studies indicate that during disasters, individuals rely on social media because it delivers immediate, first-hand accounts and instructions filling gaps that traditional media may

overlook (Seneviratne et al., 2024; Shahbazi & Bunker, 2024). *Service Quality* evaluates the level of support and responsiveness from institutions like government agencies managing crises through social media channels. Ashraf et al. (2021) examined how public authorities in Oman used Twitter during Cyclone Shaheen and found that effective service delivery via social media improved trust in institutions.

Additionally, the *Use* construct examines how frequently and effectively social media platforms are engaged by activists, responders, and affected communities. The high mobile phone penetration in Ghana and increasing digital literacy have significantly expanded social media use during crises. Oppong et al. (2022) found that Ghanaian youths actively use Twitter and WhatsApp to share flood alerts and community evacuation efforts. *User Satisfaction* assesses whether stakeholders find the platforms effective for crisis communication.

Empirical evidence from a study on Typhoon Haiyan in the Philippines showed that satisfaction with social media tools was high among users who used them for both information-seeking and emotional support purposes (Guo et al., 2020). *Net Benefits* assess the overall influence of social media on disaster management outcomes, including quicker response efforts, enhanced resource mobilization, and strengthened community resilience. According to Stewart and Schultze (2019) social media activism provides substantial advantages. For example, during the COVID-19 pandemic, platforms were effectively used for contact tracing and public awareness campaigns, which played a role in curbing misinformation and encouraging safe practices across Sub-Saharan Africa (Stewart et al., 2022). Using the ISSM framework in this study enables a comprehensive analysis of how social media systems support disaster management, pinpointing areas that need

improvement and exposing existing gaps in their application. Moreover, Jiang et al. (2021) indicate that the model offers a framework to align social media strategies with organizational goals and community needs, thereby fostering more effective disaster response efforts.

3.3 Conceptual Framework Design

The study can be conceptualized using the Information System Success Model (ISSM) to understand how social media activism influences disaster and crisis management in Ghana. The ISSM incorporates several key constructs that can be applied to this research.

System Quality refers to the performance characteristics of an information system, including usability, reliability, accessibility, and response time, which affect users' experience and determine how effectively the system supports their needs. (DeLone & Mclean, 1992; DeLone & McLean, 2003). In the context of social media platforms, system quality evaluates the platform's ability to provide seamless communication, timely access to information, and user satisfaction during critical periods, such as disasters and crises. Several studies highlighted the importance of system quality in influencing the performance and usability of platforms for crisis management (Caridà et al., 2022; Kankanamge et al., 2020). According to Kankanamge et al. (2020), the effectiveness of social media in engaging communities during disasters depends heavily on the quality of features such as user-friendly interfaces, the ability to upload real-time content (e.g., maps or images), and platform reliability. Similarly, Caridà et al. (2022) emphasized that the success of digital platforms in facilitating disaster-related communication requires consistent accessibility and quick response times to prevent disruptions. These studies demonstrated that the higher the system quality, the

better the platforms perform in disaster response activities, ensuring timely information dissemination and effective coordination among stakeholders.

This construct is drawn directly from the information system success model, which posits that system quality is one of the key factors influencing the success of an information system (DeLone & Mclean, 1992; DeLone & McLean, 2003). The inclusion of this construct in the study is justified because it aligns with the need to assess how well social media platforms function in supporting activism during crises. Given that reliable and user-friendly platforms are essential for timely and effective communication during disasters, system quality is crucial in understanding the operational efficiency of social media platforms in crisis management. Thus, by assessing system quality, this study can reveal whether the functionality of social media platforms in Ghana meets the demands of activism-driven disaster response. Improvements in system quality could enable better user engagement, faster information sharing, and more effective crisis management.

Service Quality refers to the extent to which a service meets users' expectations in terms of reliability, responsiveness, and overall satisfaction. For this study, service quality is essential as it determines how effectively stakeholders utilize social media platforms to disseminate information, coordinate responses, and engage the public. The information system success model, developed by (DeLone & Mclean, 1992; DeLone & McLean, 2003), identified service quality as a critical component of system success, emphasizing its role in user satisfaction and system use. This construct is particularly relevant for assessing how responsive, reliable, and accessible social media platforms are during crises. The importance of service quality in information systems has been highlighted by studies like (Gorla et al., 2010; Petter et al., 2008). For instance, Gorla et al.

(2010) demonstrated that high service quality enhances the overall effectiveness of information systems by ensuring smooth interaction between users and service providers. Similarly, Petter et al. (2008) argued that service quality is directly linked to user satisfaction, which influences the willingness of users to adopt a system consistently. In disaster and crisis management, responsiveness and the ability to resolve public queries in real-time are essential dimensions of service quality.

In this study, service quality is especially important since the effectiveness of social media activism in times of disaster relies not only on the information disseminated but also on the platforms' capacity to deliver timely responses and ensure continuous service during crucial periods. Platforms like Facebook and Twitter are relied upon by government agencies, non-profits, and citizens alike to share life-saving information. If these services are slow, unresponsive, or inaccessible during a crisis, the impact of social media activism is diminished, potentially leading to delays in relief efforts and coordination breakdowns. Kankanamge et al. (2020) emphasized on the need for disaster-related social media posts to be responsive and engaging, highlighting how service quality influences community engagement levels during emergencies. By integrating the service quality construct, this study can evaluate how effectively social media platforms deliver timely, dependable, and user-friendly services in disaster management. Assessing service quality will further uncover possible obstacles to maximizing social media use within Ghana's disaster management system and propose ways to enhance future practices.

Information Quality encompasses the accuracy, timeliness, relevance, and completeness of data shared through information systems, and it plays a vital role in both decision-making and crisis

management. During emergencies, the quality of information provided can significantly influence the effectiveness of response actions, stakeholder collaboration, and the level of public confidence. The Information System Success Model highlights information quality as a key factor in determining the effectiveness of information systems (DeLone & McLean, 1992). According to DeLone and McLean (2003), high-quality information must be accurate, timely, complete, and relevant to the users' needs, especially in environments requiring rapid decision-making, such as disaster and crisis management. This makes the construct particularly applicable to this study, as social media activism relies on the dissemination of high-quality information to drive effective crisis management efforts.

Studies have shown that information quality is essential in crisis management (Kankanamge et al., 2020; Luna & Pennock, 2018). For instance, Kankanamge et al. (2020) found that social media posts with clear, relevant, and visual content (e.g., maps, images) receive higher public engagement, improving situational awareness during disasters. Similarly, Luna and Pennock (2018) emphasized that accurate and timely information on social media enhances emergency response by fostering coordination among stakeholders and reducing misinformation. However, these studies also noted that poor information quality could lead to public misinterpretation, undermining crisis efforts.

In the context of Ghana, Mensah-Bonsu (2022) emphasized the need for reliable and high-quality information on social media platforms to enhance disaster preparedness and foster community participation. This study applies the Information Quality construct to explore how social media activism in Ghana influences disaster management by ensuring that timely, accurate, and complete

information reaches the right stakeholders. Thus, by adopting the Information System Success Model, this study justifies the relevance of information quality in assessing how well social media activism contributes to disaster and crisis management. It aims to measure whether the information shared through social media platforms meets the standards required for effective decision-making, public safety, and efficient resource mobilization during crises.

The *System Use* construct, drawn from the Information System Success Model (ISSM) developed by DeLone and Mclean (1992), refers to the extent to which an information system is actively utilized by users to achieve desired outcomes. This construct measures both the frequency and quality of system interactions, which are essential in determining the effectiveness of any information system, including social media platforms. The relevance of *System Use* lies in its ability to capture how individuals, organizations, and communities leverage social media to enhance disaster and crisis management efforts. Within disaster management, Luna and Pennock (2018) emphasized that how often social media is used during emergencies has a direct impact on situational awareness, the speed of information sharing, and the coordination among stakeholders. Kankanamge et al. (2020) provided further evidence, showing that increased use of social media, particularly through posts containing maps and images, leads to higher community engagement during crises. Similarly, Kurniawan and Tambunan (2023) emphasized that the active use of social media in Business Continuity Management (BCM) raises crisis awareness, although its impact on implementing crisis strategies remains limited. These studies underscore the importance of frequent, effective use of social media to achieve meaningful disaster response outcomes.

The *System Use* construct is highly relevant to this study, as it measures how often and effectively stakeholders such as government agencies, NGOs, and citizens engage with social media platforms during crises. In the context of Ghana, the use of platforms such as Facebook, WhatsApp, and Twitter for real-time communication and activism is vital for coordinating disaster response efforts, mobilizing resources, and sharing essential information. The construct is drawn from DeLone and McLean's ISSM because it emphasizes the importance of user interaction with information systems, which aligns with this study's focus on how stakeholders in Ghana actively engage with social media during disasters. By assessing System Use, the study can determine how social media activism influences disaster management outcomes and identify ways to enhance engagement for better crisis response (DeLone & McLean, 2003).

The *Social-Media Activism Intensity* construct is defined as the degree of activity, engagement, and effort exerted on social media platforms to advocate, raise awareness, and mobilize support (Falcone, 2023). This is crucial in disaster and crisis management. This construct directly impacts the effectiveness of information dissemination, stakeholder engagement, and resource mobilization during crises. Kurniawan and Tambunan (2023) highlighted that frequent and high-intensity social media posts significantly enhance crisis awareness and community participation in Business Continuity Management (BCM), showcasing its potential to drive impactful outcomes. Similarly, Kankanamge et al. (2020) demonstrated that visually appealing content, such as images and maps, increases engagement and amplifies situational awareness, emphasizing the role of targeted and intense social media activism. Caridà et al. (2022) further discussed how sustained activism fosters social innovation, reshaping stakeholder collaboration and inspiring community-driven disaster responses. In Ghana, Mensah-Bonsu (2022) underscored the effectiveness of

frequent updates and coordinated campaigns in improving disaster preparedness by mobilizing resources and informing stakeholders. In a context marked by recurring disasters like floods and epidemics, the intensity of social media activism bridges communication gaps and ensures timely responses. Using the Information System Success Model (ISSM), this study evaluates how the volume and consistency of activism contribute to disaster management success, including enhanced communication quality, system reliability, and stakeholder satisfaction. The construct "*Social-Media Activism Intensity*" is drawn from the works of (Kankanamge et al., 2020; Kurniawan & Tambunan, 2023) that focus on the role of social media in driving impactful engagement during crises. These studies support its relevance to the present research, as they offer empirical evidence showing that extensive use of social media contributes to more effective crisis management outcomes.

The *Net Benefit* construct, as defined in the ISSM by (DeLone & Mclean, 1992; DeLone & McLean, 2003), evaluates the overall effectiveness and value generated from the use of an information system, encompassing both tangible and intangible outcomes. This construct has been widely applied to measure the positive impacts of digital platforms in different contexts, including improved organizational performance, enhanced user satisfaction, and societal benefits (DeLone & McLean, 2016). In this study, the *Net Benefit* construct is relevant for assessing how social media activism contributes to the overall effectiveness of crisis responses, including better coordination, faster mobilization of resources, and enhanced public awareness.

For instance, studies (Ganoe et al., 2023; Kankanamge et al., 2020; Kurniawan & Tambunan, 2023; Luna & Pennock, 2018) showed that the *Net Benefit* construct is essential in assessing the

influence of technology and digital systems on disaster management. Luna and Pennock (2018) emphasized that social media enhances situational awareness, accelerates information diffusion, and improves stakeholder coordination in crisis situations. Similarly, Kankanamge et al. (2020) highlight how disaster-related social media channels foster community engagement, leading to improved outcomes such as better preparedness and response. These benefits align with the idea of Net Benefit, as they demonstrate how technology-driven interventions provide real societal value by mitigating the effects of crises. Ganoe et al. (2023) further emphasized that volunteerism, driven by empathy and digital activism, plays a crucial role in disaster response, which can be evaluated through the lens of *Net Benefit* by measuring the impact of these efforts on community resilience and recovery. In addition, Kurniawan and Tambunan (2023) discussed the role of social media in creating crisis awareness in business continuity management. Although its direct effect on implementation may be limited, it contributes to preparedness, which is a significant benefit in ensuring organizational and societal resilience during disasters.

In this study, the *Net Benefit* construct is essential to evaluate how social media activism influences disaster outcomes. This includes measuring the positive effects of activism on the speed of response, public engagement, resource mobilization, and resilience-building efforts. Social media activism not only facilitates information exchange but also drives societal change by encouraging proactive disaster preparedness and holding authorities accountable for disaster management practices. Thus, the Net Benefit construct provides a comprehensive framework for assessing the real-world value generated by social media activism beyond communication alone.

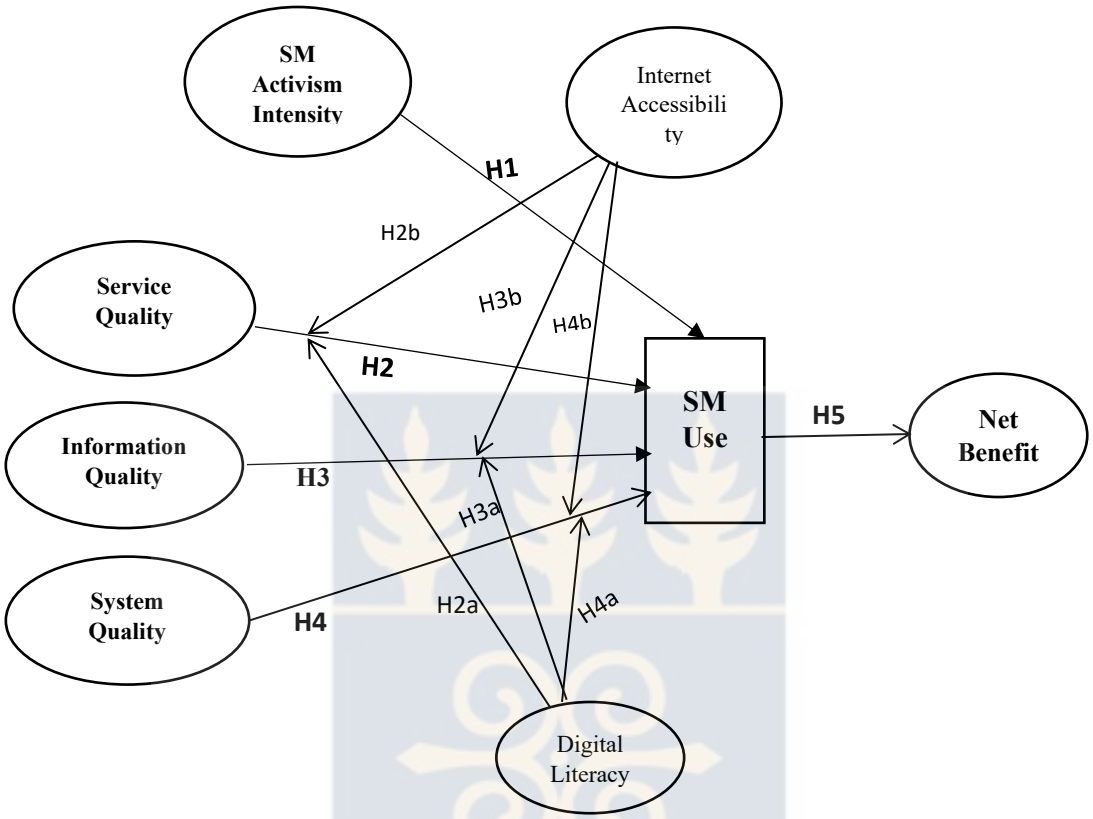

Figure 3.3: Conceptual Model of the Research

3.4 Hypothesis Development

3.4.1 Social media activism intensity and social media use in disaster and crisis management

Social media activism intensity, characterized by frequent and impactful online activities, plays a crucial role in enhancing social media use for disaster and crisis management (Ogie et al., 2022). The construct aligns with the Information System Success Model (ISSM), where the intensity of activism contributes to system use and net benefits in crisis scenarios. Studies have emphasized the growing influence of social media in disaster management (Kankanamge et al., 2020; Kurniawan & Tambunan, 2023; Mensah-Bonsu, 2022; Seneviratne et al., 2024). For instance,

Kurniawan and Tambunan (2023) found that high-intensity social media engagement increases awareness and participation in crisis management activities. Similarly, Kankanamge et al. (2020) demonstrated that visual and dynamic content fosters greater community interaction and aids in situational awareness during emergencies. Also, Mensah-Bonsu (2022) highlighted how active social media campaigns improve disaster preparedness by mobilizing resources and engaging diverse stakeholders. Furthermore, Seneviratne et al. (2024) emphasized the significance of social media activism in addressing disaster management challenges like misinformation and stakeholder fragmentation. These findings suggest that the intensity of social media activism directly correlates with the effective use of platforms in managing disasters. Therefore, the study hypothesis that;

> ***H1:*** *The intensity of social media activism positively influences the utilization of social media for disaster and crisis management.*

3.4.2 Service quality and system use in disaster and crisis management

Service quality refers to the overall performance and responsiveness of a system, including how well a platform meets the needs and expectations of users during their interactions (Johnson & Karlay, 2018). In this study, service quality involves factors such as the promptness of responses, the availability of relevant features, and the reliability of support provided on social media platforms. Platforms that deliver high service quality are more likely to foster increased user engagement and ensure effective coordination and participation during crises (Demir et al., 2020). Kankanamge et al. (2020) found that higher service quality enhances the adoption and reliance of information systems, leading to more valuable and seamless experiences. Again, Research indicates that high service quality enhances the effectiveness of social media platforms in crises by facilitating faster information dissemination, situational awareness, and user satisfaction. For

instance, Caridà et al. (2022) emphasized the need for service quality to support digital platforms in driving social innovation during crises. This shows that service quality contributes to effective stakeholder coordination and the timely provision of resources. Another study by Luna and Pennock, (2018) highlighted the importance of service quality in overcoming common challenges in social media crisis management, including interoperability issues and public misinterpretation.

Digital literacy enhances the effect of service quality on social media use during disasters by allowing consumers identify, evaluate, and use platform features including real-time alerts and support tools that might otherwise go unnoticed or underused (Seneviratne et al., 2024). Literate users can negotiate difficult interfaces, understand platform guidance, and change services to fit changing crisis environments, translating high service quality into consistent and effective engagement (Carlsson, 2019). Conversely, without sufficient digital skills, even robust service infrastructures including chatbots, live-streaming, and resource directories could remain underused, limiting coordination and response efficiency (Moore & Czerwinska, 2019). Likewise, constant internet access guarantees that consumers of these luxury services will always be reachable. When connectivity is inconsistent or unaffordable, service features lose value since they cannot play their supporting roles in real time (Dwivedi et al., 2022). Important moderators thus are consistent internet access and digital literacy. Armed stakeholders with the tools and opportunity to completely exploit platform capabilities release the potential of service quality to drive social media use (Dwivedi et al., 2021). Policy-wise, investments must thus transcend platform enhancements to include digital skills development and infrastructure expansion, ensuring that service innovations produce real crisis-management advantages (McCarthy et al., 2023). Therefore, the study hypothesis that:

H2: *Service quality positively influences social media use in disaster and crisis management.*

H2a: *Digital literacy moderates the relationship between service quality and social media use.*

H2b: *Internet accessibility moderates the relationship between service quality and system use.*

3.4.3 Information quality and system use in disaster and crisis management

Information quality refers to the extent to which a system delivers information that is relevant, accurate, complete, and timely (Alshikhi & Abdullah, 2018). In disaster and crisis management, high-quality information shared on social media platforms enables users to make informed decisions, coordinate resources, and respond effectively. Luna and Pennock (2018) found that improved situational awareness and faster information diffusion, driven by high information quality, positively influence emergency responses. Moreover, studies (Harrison, 2016; Kankam et al., 2023; Laumer et al., 2017) have further highlighted the significance of information quality across various fields. Laumer et al. (2017) highlighted the significance of high information quality in information systems for user satisfaction and task efficiency in organizational workflows. Similarly, Kankam et al. (2023) revealed that precise and timely information significantly improves collaboration and operational efficiency in supply chain performance. Also, Harrison (2016) argued that organizations leveraging high-quality information achieve better decision-making outcomes and system effectiveness. Therefore, high information quality on social media

platforms is expected to promote greater system use, ensuring effective communication, resource mobilization, and timely responses during emergencies. Hence, the study hypothesizes that;

H3: *Enhanced information quality will positively affect social media use in disaster and crisis management*

Furthermore, digital literacy gives consumers tools for critical evaluation that boost the impact of accurate information on social media interaction during crises (Isnaini et al., 2025). Empirical studies show that, strong digital literacy users are more adept at spotting dependable sources and factual content, which increases their confidence in and reliance on social media platforms when high-quality information is easily available (Isnaini et al., 2025; Kankanamge et al., 2020). This capacity helps to stop the spread of false information and lessens the cognitive load of filtering noise, improving the efficient system use under crisis conditions (Milenkova & Lendzhova, 2021). Digital literate users navigating platform affordances including advanced search functions, verification tools, and community-driven fact-checking can also locate, share, and act on accurate information in real time (Seneviratne et al., 2024). Digital literacy is basically a catalyst that turns information quality into meaningful interaction, ensuring that great informational materials translate into proactive and coordinated social media use during disasters (Carlsson, 2019). Thus, more degrees of digital literacy will significantly improve the favorable correlation between SM use in crisis management and information quality. Hence the study hypothesis that;

H3a: *Digital literacy moderates the relationship between information quality and social media use.*

Moreover, internet accessibility is a major moderator since it determines whether outstanding knowledge can really reach and be applied by end users in crises. Even the most accurate, timely updates lose value if recipients cannot routinely connect to social media channels owing to infrastructure gaps or unaffordable service (Kurniawan & Tambunan, 2023). High data costs and uneven network coverage in Ghana have regularly hampered real-time warnings and relief coordination in disaster-prone areas (Seneviratne et al., 2024).

While those on poor networks turned to rumor-prone WhatsApp groups, Ogie et al. (2022) found that communities with consistent broadband access demonstrated notably more reuse of verified alerts. Caridà et al. (2022) also showed by over 40% increasing rural internet nodes raised click-through rates on official advisories during flood events. Conversely, Domalewska (2019) found that, despite great message quality, areas of Accra with patchy connectivity suffered vital delays of up to four hours in rescue mobilization. Thus, not only guarantees fair consumption across socioeconomic levels but also increases the reach of quality information by means of robust internet access (Wiegmann et al., 2021). Enhanced connectivity reduces latency and packet loss, creating a foundation for effective social media–based crisis management strategies and reinforcing the positive influence of high-quality information on platform usage (Kankanamge et al., 2020). Therefore, the idea that internet accessibility enhances the information-quality and social-media-use connection is empirically supported over several disaster contexts. Hence, the study hypothesizes that;

H3b: *The availability of internet access moderates the link between information quality and the use of social media.*

3.4.4 System Quality and use of social media in disaster and crisis management

System quality is the functionality, reliability, usability, and overall performance of digital platforms, influencing user engagement (Benmoussa et al., 2018). It is crucial for effective disaster and crisis management in social media platforms, enabling rapid information dissemination, stakeholder coordination, and efficient resource mobilization. Yuan et al. (2021) and Oppong et al. (2022) emphasized the importance of system quality in shaping users' perceptions of platform effectiveness. Key attributes of system quality include reliability, usability, responsiveness, security, and accessibility, which positively impact social media use during emergencies (Cvetković et al., 2023; Ogie et al., 2022).

Hazaa et al. (2021) emphasized that superior systems improve coordination and response times by reducing operational difficulties. Similarly, Khan et al. (2023) demonstrated that system dependability and usability enhance communication between emergency responders and the public. According to Alabaddi et al. (2020), system quality and information quality together account for 85.3% of the variation in the effectiveness of crisis management. While these findings underscore the importance of system quality, gaps remain in understanding its full impact. Thus, this study builds on earlier findings by proposing that system quality has a positive relationship with the effective use of social media in disaster and crisis management. Therefore, the study hypothesis that;

> ***H4:*** *The quality of a system has a positive impact on the utilization of social media in disaster and crisis management.*

Furthermore, digital literacy shapes users' perspective and application of system quality in social media-enabled crisis management settings. High digital literacy users can negotiate challenging platform features including filtering feeds, customizing alerts, and technical glitch troubleshooting, maximizing system performance when it really counts (Eden et al., 2024). Users lacking these skills, on the other hand, may underused advanced capabilities independent of underlying system strength. Studies in emergency communication show that digitally literate people more effectively identify and use platform tools to obtain and distribute critical information (Afridi et al., 2023; Kordova & Hirschprung, 2023).

Also, empirical research in e-government environments shows that digital literacy magnifies the effect of system dependability and usability on user engagement (Jane, 2024). Moreover, Ganoe et al. (2023) found that digital skills enable users to fast adapt to new interface updates during developing crises, supporting the good influence of system stability on timely information sharing. Digital literacy thus ensures that, by regulating the impact of system quality on social media use, technical advancements translate into useful crisis-response benefits. Training courses aiming at raising digital competencies including critical evaluation of interface options, privacy settings management, and use of analytics dashboards can thus maximize the usefulness of any given system quality level (Reddy et al., 2023). Hence the study hypothesized that;

> ***H4a:*** *Digital literacy moderates the link between system quality and the use of social media.*

In addition, online access essentially determines how system quality turns into actual social media interaction during crises since users lack consistent, reasonably priced connections even the most

powerful, user-friendly platforms cannot be used (Kankanamge et al., 2020). Studies show that high system uptime and rapid load times only boost crisis-related social media use when audiences have uninterrupted access, because sporadic connectivity truncates sessions and discourages interaction with platform features (Bukar et al., 2022; Caridà et al., 2022). Moreover, in areas with low bandwidth users give fundamental communication top importance over advanced system capabilities by compromising the system quality and system use linkage (Ogie et al., 2022). Reliable access is the gatekeeper, according to empirical studies (Oz et al., 2018; Singh & Wassenaar, 2016). Only when Internet service is stable will improvements in system responsiveness and availability produce quantifiable increases in information sharing (Hendeniya & Fernando, 2022). Therefore, internet accessibility is not a peripheral issue but rather a crucial moderator that decides whether investments in system quality materialize as increased social media use in crises. Hence, the study hypothesizes that;

H4b: *Internet access moderates the link between system quality and social media usage.*

3.4.5 Social media use and net benefit in disaster and crisis management

Social media use describes the extent and ways in which people, organizations, and communities interact with social media platforms to exchange information, organize activities, and mobilize resources in times of disasters and crises (Cvetković et al., 2023; Young et al., 2020). Net benefit on the other hand, refers to the overall impact derived from using a system, measured in terms of improved outcomes, performance, or stakeholder well-being (Feor et al., 2023). Research by (Cvetković et al., 2023; Domalewska, 2019; Kurniawan & Tambunan, 2023; Mensah-Bonsu, 2022) has emphasized the pivotal role of social media in reshaping disaster management. Kurniawan and Tambunan (2023) found that social media significantly improves awareness and

coordination during crises, leading to better outcomes. Domalewska (2019) emphasized that effective use of social media reduces response times and enhances information flow, while Cvetković et al. (2023) demonstrated its role in fostering community resilience and preparedness. Mensah-Bonsu (2022) found that social media facilitated resource mobilization and raised awareness during flooding events in Ghana. Within Ghana's disaster management context, characterized by communication gaps and limited resources, the link between social media utilization and overall benefits is of critical importance. Therefore, the above evidence shows that greater social media use positively correlates with improved net benefits. Hence, the study hypothesis that;

> ***H5:*** *The use of social media has a positive impact on the overall benefits gained from disaster and crisis management.*

3.5 Chapter Summary

This chapter outlines the research hypotheses and conceptual model for examining the influence of social media activism on disaster and crisis management in Ghana, guided by the Information System Success Model (ISSM) as the theoretical framework. It formulates hypotheses related to system quality, information quality, system usage, user satisfaction, and net benefits in disaster and crisis management, thereby establishing the theoretical basis for subsequent empirical investigation and analysis.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Chapter Overview

The preceding chapter dealt with the theoretical framework and hypothesis formulation for this study, with particular attention to the Information System Success Model. This current chapter advances to the research methodology, examining the influence of social media activism on disaster and crisis management in Ghana. It outlines the research approach, target population, sampling methods and sample size, data collection procedures and instrument design, techniques for data analysis, ethical considerations, and concludes with a chapter summary.

4.2 Research Paradigm

A research paradigm refers to an overarching framework that includes the assumptions, principles, and methodologies guiding a specific research community (Kivunja & Kuyini, 2017). It serves as a guide for conducting research, shaping the way researchers formulate their questions, design their studies, and interpret their results. The paradigm one adopts influences every aspect of the research process, from the choice of methodology to the way findings are validated and presented. A research paradigm refers to a broad perspective or belief system that shapes how knowledge is perceived and developed. It encompasses assumptions about reality (ontology), the nature of knowledge (epistemology), and the approaches employed to acquire knowledge (methodology) (Rehman & Alharthi, 2016).

Firstly, ontology concerns the essence of reality and the scope of what can be understood about it (Moon & Blackman, 2014). It addresses questions about what exists and what it means for

something to exist. For instance, in positivism, reality is objective and can be observed and measured, whereas in constructivism, reality is seen as subjective and constructed by human experiences and social contexts (Ryan, 2018). Secondly, epistemology concerns the nature and extent of knowledge, as well as the ways through which it is obtained. In a positivist paradigm, knowledge is acquired through empirical observation and experimentation, emphasizing objectivity and generalizability.

In contrast, interpretivism, another paradigm, relies on understanding the meanings and experiences of individuals, thus valuing subjective insights and contextual knowledge (Pervin & Mokhtar, 2022). Finally, methodology refers to the approaches, procedures, and techniques employed for data collection and analysis. It is closely linked to the epistemological stance of the paradigm. For instance, positivist research often employs quantitative methods such as surveys and experiments, while constructivist research favors qualitative methods like interviews and ethnographies (Alharahsheh & Pius, 2020). Furthermore, methodology aims to provide guidelines for the discovery of knowledge through the application of ontological knowledge. Information Systems (IS) research has evolved along three primary paradigms including positivism, interpretivism and critical realism over the years (Pervin & Mokhtar, 2022).

The Positivist Paradigm is based on the notion that reality exists independently and can be objectively observed and described from an external viewpoint, free from the researcher's personal biases or interpretations. It rests on the assumption that both the natural and social worlds follow laws and patterns that can be uncovered through empirical observation and measurement. Research within this paradigm is typically quantitative, using systematic approaches such as surveys,

experiments, and statistical techniques to test hypotheses and produce findings that can be generalized (Alharahsheh & Pius, 2020). Positivism emphasizes the importance of objectivity, replicability, and predictability. Researchers adopting this paradigm strive to remain detached and neutral, ensuring that their values and perspectives do not influence the research process or outcomes. This approach is rooted in the scientific method, where hypotheses are formulated based on theory and then empirically tested using systematic observation and experimentation (Park et al., 2020). One criticism of positivism is its tendency to overlook the subjective and socially constructed nature of human experiences, which can be crucial in understanding complex social phenomena. Despite this, positivism remains a dominant paradigm in the natural sciences and certain fields of social science due to its emphasis on rigor and empirical validation (Park et al., 2020).

The interpretivist paradigm asserts that reality is subjective and shaped by social interactions. It seeks to uncover the meanings of social phenomena from the viewpoints of participants. This approach stresses the importance of understanding individuals' subjective experiences within their social settings, based on the idea that reality is created through social constructs and understood through the interpretations of those involved (Pervin & Mokhtar, 2022). This paradigm contrasts with positivism, which views reality as objective and independent of human perception. Interpretivist researchers focus on exploring how individuals or groups make sense of their experiences and the meanings they attach to them. They aim to understand the complex, nuanced realities that people live in, acknowledging that these realities are influenced by context, culture, and interaction. To obtain comprehensive and detailed insights, interpretivism often relies on qualitative approaches, including in-depth interviews, participant observation, and ethnographic

studies (Alharahsheh & Pius, 2020). These methods allow researchers to immerse themselves in the participants' world, gaining insights from their perspectives. An important feature of interpretivism is its focus on reflexivity, which involves researchers critically examining how their own perspectives and involvement may affect the research process and results. It acknowledges that a researcher's values, background, and interactions with participants can influence the study's outcomes. By emphasizing the contextual and subjective dimensions of human experiences, interpretivism offers a useful framework for exploring social phenomena in depth, yielding insights that are often missed by positivist approaches (Pervin & Mokhtar, 2022).

Critical realism (CR) is a philosophical perspective introduced by Roy Bhaskar in the 1970s that seeks to reconcile positivism and interpretivism. It argues that while reality exists independently of human perception, our knowledge of it is influenced by cultural, social, and linguistic contexts (Lawani, 2020). A central principle of CR is the differentiation between the "real" world and the "observable" world. The "real" world encompasses the underlying structures and mechanisms responsible for producing observable events, even if these mechanisms are not directly perceptible. This ontology contrasts with positivism, which emphasizes observable phenomena and universal laws, and interpretivism, which focuses on subjective interpretations (Ryan, 2018).

Epistemologically, critical realism acknowledges that our knowledge of the world is fallible and theory-laden, meaning it is always mediated by human interpretations. This paradigm encourages a methodological pluralism, often integrating both qualitative and quantitative methods to uncover the deeper, often hidden, mechanisms at work (Ryan, 2018). Critical realism is particularly useful in social sciences, where it aims to explain not just the patterns observed in social behavior, but

also the underlying causes and structures. For instance, it has been applied to understand complex social phenomena such as poverty, education inequalities, and health disparities, by identifying the root causes and suggesting actionable interventions (Fletcher, 2017). By acknowledging the complexity of social reality and the limitations of our understanding, critical realism offers a robust framework for conducting research that is both explanatory and transformative (Lawani, 2020).

This research adopts the positivist paradigm as its guiding framework, after outlining the three main paradigms in IS studies. The choice is appropriate since the study aims to evaluate the influence of social media activism on disaster and crisis management. Specifically, it employs Partial Least Squares-Structural Equation Modelling (PLS-SEM) to analyze the data and tests the Information System Success Theory within this context, guided by several hypotheses. Positivism enables researchers to observe real-world phenomena through experimentation and develop rational explanations. It also maintains that the validity of a scientific theory is determined by the alignment between theoretically derived predictions and empirical data collected through sensory observation (Park et al., 2020).

4.3 Research Method

According to Taherdoost (2021), a research method involves a set of procedures, tools, and techniques for collecting and analyzing data. Firdaus et al. (2021) note that researchers commonly employ two main methodologies: qualitative and quantitative. The interpretivist paradigm aligns with qualitative methods, whereas the positivist paradigm corresponds with quantitative methods. In this study, a survey was adopted as the chosen quantitative research method. Surveys allow researchers to quantitatively represent the views of a population by analyzing data from a sample

(Creswell, 2009). Rooted in the positivist paradigm, surveys are typically cross-sectional in design and rely on questionnaires for data collection, with the goal of making generalizations from the sample to the broader population (Singh & Sagar, 2020).

A cross-sectional design is practical and cost-effective for this type of research. Since disasters and crisis situations vary widely in frequency and impact, measuring the influence of social media activism at a single point ensures that the study can provide actionable insights without the logistical challenges of tracking changes over time (Bryman, 2016). Furthermore, similar studies in crisis management and information systems, such as Oppong et al. (2022) and Kankanamge et al. (2020), also employed cross-sectional designs to assess how individuals and organizations use social media platforms during emergencies. The study adopts a cross-sectional design, utilizing questionnaires as the primary tool for data collection. It is considered cross-sectional since it explores the associations between variables such as information quality, service quality, system use, user satisfaction, net benefit, and system quality at one specific point in time. The focus is to assess constructs like information quality, service quality, and system quality and how it influences system use.

4.3.1 Questionnaire Development

The study employed a survey design. In creating the questionnaire, the guidelines outlined by Architha and Sreeramana (2020) were followed to guarantee the reliability and validity of the data collection tool. According to their framework, developing a survey instrument involves two key stages: the initial design of the instrument and its subsequent refinement.

The survey tool (questionnaire) was designed based on a review of existing literature on social media, disaster, and crisis management. From this review, the Information System Success Model was adopted as the guiding framework, and items were developed for each construct. The questionnaire consisted of three sections. Section A covered respondents' demographic information, including variables such as gender, age, marital status, occupation, and monthly income. Section B addressed social media usage, with questions on the platforms used, frequency, and duration of use. Section C examined the factors influencing the role of social media in disaster and crisis management, structured around six constructs: System Quality, Information Quality, Service Quality, Use/Intention to Use, User Satisfaction, and Net Benefit. These constructs and their measurement indicators were identified through the literature review. Each construct was assessed using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale is widely recognized for producing reliable and valid results in multivariate analysis (Hair et al., 2021).

Following the design of the questionnaire, a pre-test was carried out prior to conducting the pilot test (Hashim et al., 2022; Shakir & Rahman, 2022). The purpose of the pre-test was to evaluate the reliability of the measurement tools used to assess the main constructs of the ISS Model, namely system quality, information quality, service quality, system use, user satisfaction, and net benefits. Reliability refers to the stability and consistency of the measurements across repeated applications, ensuring that the tools produce trustworthy outcomes (Sürücü & Maslakc, 2020). For the pre-test, the questionnaire was administered to 10 participants with characteristics similar to the intended population but excluded from the final study sample. This step helped to identify possible weaknesses in the instruments and to verify that the questions were clear and appropriate.

Furthermore, internal consistency reliability of the scales was assessed using Cronbach's alpha, a widely used statistical measure that evaluates how closely related items in a scale are. An alpha coefficient of 0.70 or higher is generally considered acceptable, signifying that the items reliably measure the same construct (Taber, 2018). Each construct (e.g., system quality, user satisfaction) was examined item by item to confirm consistency. Items that weakened overall reliability were either revised or eliminated. Based on participant feedback and Cronbach's alpha outcomes, the final questionnaire was refined to ensure that all items effectively measured their corresponding constructs, thereby strengthening content validity (Architha & Sreeramana, 2020).

Following revisions to certain sections of the questionnaire, a pilot study was carried out with sixty (60) participants, mainly social media users during disasters and crises (including NADMO officials, and National Fire Service). The feedback received was largely positive, indicating that the questionnaire had a strong level of content validity and was therefore suitable for data collection. A summary of the constructs used in this study is presented in Table 4.1.

Table 4.1: Constructs Adopted for the Study

Constructs	Number of Items	Adapted from
Information Quality	5	(DeLone & Mclean, 1992)
System Quality	6	(DeLone & Mclean, 1992)
Service Quality	5	(DeLone & McLean, 2003)
Social media Use	4	(DeLone & Mclean, 1992) adapted by (Kaplan & Haenlein, 2010)
Social media Activism Intensity	5	(Valenzuela et al., 2012)
Net Benefit	5	(DeLone & McLean, 2003)

Source: Author's construct

4.3.3 Participants Setting

The respondents for this study were individuals living in Ghana, including journalists, bloggers, and broadcasters reporting on crisis events, as well as officials from government bodies such as the National Disaster Management Organization, the Ghana National Fire Service, and the Environmental Protection Agency. The study specifically targeted participants who are frequent users of social media, since its aim is to evaluate the influence of social media activism on disaster and crisis management in Ghana.

4.3.4 Sample Selection

According to Shukla (2020), a good sample is one that accurately represents a population, such that the data collected and analyzed from it yields results consistent with those that would have

been obtained from studying the entire population. Consequently, ensuring consistency and reliability of findings requires researchers to give careful consideration to sample size (Hair et al., 2021). To guarantee sample adequacy, this study followed the principles of PLS-SEM. Among the commonly applied methods for determining minimum sample size in PLS-SEM is the "10-times rule" (Hair et al., 2021). This rule stipulates that the minimum number of participants should be greater than "10 times" the maximum number of inner or outer model paths directed at any construct in the research model (Hair et al., 2021). In this study's model (see Figure 3.3), the construct with the largest number of indicators is System Quality, which has six. Based on the "10-times rule," the minimum sample size required is therefore 6 × 10 = 60 (Ismael & Duleba, 2021). Nonetheless, this study collected data from 400 respondents, far surpassing the minimum requirement set by the rule.

After determining the minimum sample size required for the study, it was important to choose a sampling method suitable for data collection. Consequently, the study employed purposive sampling. This method was selected because it aligns more effectively with the research objectives (Campbell et al., 2020). Furthermore, given the wide geographical distribution of respondents nationwide, it was not feasible to distribute questionnaires to every social media user involved in disaster and crisis situations. Hence, purposive sampling allowed the researcher to reach accessible participants in different regions of the country, primarily through Google Forms.

4.3.5 Data Collection Process

This study made use exclusively of primary data, which was obtained through a three-step process: developing the survey instrument, selecting a suitable sampling frame, and administering the

questionnaire to participants. The questionnaires were designed based on the study's hypotheses to ensure alignment with its objectives. Data were gathered from individuals in Ghana who had used social media during disasters and crises. Both Google Forms and in-person administration methods were employed, with respondents permitted to complete the survey only once. Data collection took place between August and September 2024, yielding a total of 400 responses (220 submitted electronically and 180 completed in print).

4.4 Method of Data Analysis

Participant responses were collected, after which the questionnaires were reviewed for any missing information. Since all surveys were complete, the data was prepared for analysis. The responses were coded and grouped into composite constructs using the Statistical Package for Social Sciences (SPSS) and subsequently analyzed with the Smart-PLS software.

The study incorporated several constructs and their interconnections as outlined in the ISSM framework, making Smart-PLS well-suited for analyzing such complex structural relationships simultaneously (Hair et al., 2021b). In addition, Smart-PLS is advantageous when working with smaller sample sizes, as it performs reliably under such circumstances (Hair et al., 2019). Given that the study seeks not only to examine theoretical links but also to forecast the influence of social media activism on disaster and crisis management outcomes, Smart-PLS is particularly appropriate due to its prediction-oriented focus (Bukar et al., 2022). The software further includes integrated bootstrapping techniques to evaluate the significance of path coefficients and provides comprehensive outputs such as Composite Reliability, Average Variance Extracted (AVE), discriminant validity, R^2, and Q^2, all of which contribute to assessing model robustness (Hair et

al., 2019). Its intuitive graphical interface also makes Smart-PLS a highly recommended tool in applied social science research, ensuring accessibility for both researchers and practitioners.

Structural Equation Modelling (SEM) is a multivariate statistical method widely applied in Information Systems (IS) research for validating constructs and analyzing relationships among them (Hair et al., 2021). As explained by Tarka (2018), SEM refers to "a set of methods designed to express hypotheses concerning the means, variances, and covariances of observed data through a smaller number of structural parameters defined by a proposed model." SEM can be approached in two main ways: Covariance-Based SEM (CB-SEM), typically carried out with tools like M-plus, AMOS, and LISREL, and Partial Least Squares SEM (PLS-SEM), which focuses on variance analysis and can be implemented with software such as Smart-PLS and ADANCO (Dash & Paul, 2021; Hair et al., 2021). This study employed the PLS-SEM method, primarily because it does not rely on data distribution assumptions, unlike CB-SEM (Sakaria et al., 2023). PLS-SEM is particularly advantageous for studies with smaller sample sizes and skewed data distributions (Fauzi, 2022). Furthermore, it was selected because the research objective centered on exploring relationships between dependent and independent constructs using effect size and predictive relevance—features not supported by CB-SEM (Dash & Paul, 2021).

In PLS-SEM, the initial stage of result evaluation involves analyzing the measurement models. This process enables researchers to align the theoretical framework of the study with the actual data collected. The criteria for evaluating measurement models vary depending on whether the constructs are formative or reflective (Hair et al., 2021). Since the constructs in this study were reflective, it was necessary to first test the measurement model for reliability and validity before

proceeding to the structural model assessment. Reliability was examined through indicator reliability and internal consistency, while validity was assessed in terms of convergent and discriminant validity, applying established decision rules (Hair et al., 2021). Once the measurement model was confirmed, the structural model was evaluated following five key steps outlined by (Hair et al., 2021; Mohamed et al., 2018): checking for collinearity, examining the significance and relevance of relationships, evaluating the Goodness of Fit (GOF), determining the effect size (f^2), and assessing predictive relevance (q^2).

While PLS-SEM was central to construct validation and analyzing the relationships between independent and dependent variables, SPSS was used in the preliminary stage for data preparation and descriptive statistics, providing a solid basis for the subsequent PLS-SEM analysis.

4.5 Ethical Considerations

Approval to conduct the study was granted by the department. Participants were informed about the purpose of the research, the reasons for their selection, issues of confidentiality, and provided with a consent form to decide whether or not to take part. Privacy was safeguarded by allowing participants to respond to questions in their own comfort, using their personal phones. Additionally, data was anonymized in aggregate form to minimize the risk of identifying individuals. The researcher's affiliations and objectives were openly communicated to foster trust with both participants and stakeholders.

4.6 Chapter Summary

This chapter focuses on the research methodology applied in the study. It presents a comprehensive description of the selected research methods and the specific strategies employed to meet the study's objectives. The chapter defines the target population, detailing the characteristics of the individuals or groups under investigation. It further outlines the sampling procedures used and explains the reasoning behind the chosen sample size to guarantee accuracy and representativeness. In addition, it discusses the data collection techniques, emphasizing the tools and instruments designed to obtain credible and valid information. The data analysis procedures are also explained, demonstrating how the results correspond with the study's aims. Lastly, the chapter highlights ethical considerations, ensuring compliance with ethical principles in participant involvement and data management.

CHAPTER FIVE

RESULTS AND ANALYSIS

5.1 Chapter Overview

This chapter presents the PLS-SEM assessment and testing of the proposed research model, organized into four main sections. The first section outlines the demographic profile of the study participants. The second section examines the measurement model by assessing indicator reliability, internal consistency, convergent validity, and discriminant validity, ensuring that standard criteria are met. The third section focuses on evaluating the structural model, addressing issues such as multicollinearity, model fit, path coefficient significance, effect sizes, and predictive relevance. Finally, the fourth section analyzes the moderating effects of internet accessibility and digital literacy on the relationship between the independent and dependent variables.

5.2 Demographic Characteristics of Respondents

Table 5.1 shows a balanced yet slightly male-dominated sample, with 215 (53.8 %) males and 185 (46.2 %) females, indicating diverse gender perspectives in social media activism. Age distribution shows that 116 respondents (29.0 %) are 18-25 years old, 118 (29.5 %) are 26-35, 73 (18.2 %) are 36-45, 47 (11.8 %) are 46-55, and 46 (11.5 %) are 56–65, indicating a predominantly young and digitally active population (58.5 % under 35). Regarding marital status, 182 respondents (45.5 %) are single, 110 (27.5 %) married, 106 (26.5 %) divorced, and 2 (0.5 %) widowed. Educational attainment is relatively high with 113 (28.2 %) completing SHS or below, 90 (22.5 %) holding a diploma, 170 (42.5 %) possessing a bachelor's degree, 15 (3.8 %) having master's, and 12 (3.0 %) a PhD. This suggests a well-informed cohort capable of critically assessing crisis information.

Occupationally, 25 respondents (6.2 %) are students, 173 (43.3 %) work in public service, and 202 (50.5 %) are private-sector or NGO employees, reflecting a largely professional sample with extensive social medias. Monthly income brackets show 112 (28.0 %) earning 0 - GHC 1000, 139 (34.8 %) GHC 1001 - 2000, 101 (25.2 %) GHC 2001 - 3000, 1 (0.2 %) GHC 3001 - 4000, and 47 (11.8 %) above GHC 4001, highlighting economic diversity that may affect digital engagement patterns.

In terms of platform preference, 93 respondents (23.2 %) primarily use WhatsApp, 84 (21.0 %) Facebook, 72 (18.0 %) Twitter (X), 46 (11.5 %) Instagram, and 105 (26.3 %) other platforms. Duration of social media use is substantial with 54 (13.5 %) under 4 years, 154 (38.5 %) 5 - 10 years, and 192 (48.5 %) over 10 years, demonstrating long-term engagement. Weekly usage frequency is high, with 5 respondents (1.2 %) using social media 1 - 4 times, 139 (34.8 %) 5 - 10 times, and 256 (64.0 %) over 10 times per week, indicating a very active user base. Such demographics imply a digitally savvy and engaged population, essential for understanding the impact of social media activism on disaster and crisis management in Ghana.

Table 6 **Table 5.1 Demographic Distribution of Respondents**

Demographic	Characteristics	Number	Percentage (%)
Gender	Male	215	53.8
	Female	185	46.2
	Total	**400**	**100**
Age	18-25	116	29.0
	26-35	118	29.5
	36-45	73	18.2
	46-55	47	11.8
	56-65	46	11.5
	Total	**400**	**100**
Marital Status	Single	182	45.5
	Married	110	27.5
	Divorced	106	26.5
	Widowed	2	0.5
	Total	**400**	**100**
Education	SHS and below	113	28.2
	Diploma	90	22.5
	Degree	170	42.5
	Masters	15	3.8
	PhD	12	3.0
	Total	**400**	**100**
Occupation	Student	25	6.2
	Public service worker	173	43.3
	Private service worker/NGO	202	50.5
	Total	**400**	**100**
Monthly Income	0-GHC1000	112	28.0
	GHC 1001-GHC2000	139	34.8
	GHC 2001-GHC3000	101	25.2
	GHC 3001-GHC4000	1	0.2
	above GHC 4001	47	11.8
	Total	**400**	**100**
Platform Usage	WhatsApp	93	23.2
	Facebook	84	21.0
	Twitter (X)	72	18.0
	Instagram	46	11.5
	Other	105	26.3
	Total	**400**	**100**
Duration of usage	below 4 years	54	13.5
	5-10 years	154	38.5
	above 10 years	192	48.5
	Total	**400**	**100**
Weekly social media usage	1-4 times	5	1.2
	5-10 times	139	34.8
	Above 10 times	256	64.0
	Total	**400**	**100**

Source: Author's construction

5.3 Assessment of Measurement Model

The initial stage in evaluating results with PLS-SEM involves analyzing the measurement models. Model estimation provides empirical assessments of the links between constructs (structural model) and their indicators (measurement models) (Hair et al., 2021). Essentially, evaluating the measurement model allows researchers to compare the actual data collected with the theoretical framework guiding the study. The criteria for assessing measurement models differ for formative and reflective constructs (Edeh et al., 2023; Hanafiah, 2020). As this study utilized only reflective constructs, it was necessary to confirm both the validity and reliability of the measurement model before proceeding to the structural model. Accordingly, the study examined indicator reliability, internal consistency, convergent validity, and discriminant validity, following the established evaluation standards (Edeh et al., 2023; Hanafiah, 2020).

5.3.1 Indicator Reliability

Indicator reliability refers to the degree to which a variable or group of variables consistently measures what it is intended to measure (Gupta et al., 2022). To evaluate this, reflective indicator loadings are examined. Loadings of 0.708 or higher are generally recommended, as they indicate that the construct or latent variable accounts for more than 50% of the indicator's variance, thereby confirming acceptable reliability (Hair et al., 2019). However, not all indicators demonstrated significant loadings on their respective latent variables, leading to their removal from the model (Gefen et al., 2011). In the initial analysis, some indicators fell below the required threshold. For example, SQ5 was excluded due to its low loading of 0.434. After removing SQ5, the model was re-estimated using the PLS algorithm, and all remaining indicators loaded significantly on their latent variables. This confirmed that the indicators met the minimum threshold and were reliable

measures of their constructs. The results were then used to assess and evaluate both the measurement and structural models. Figure 5.1 presents the indicator loadings of the model as generated through the PLS algorithm.

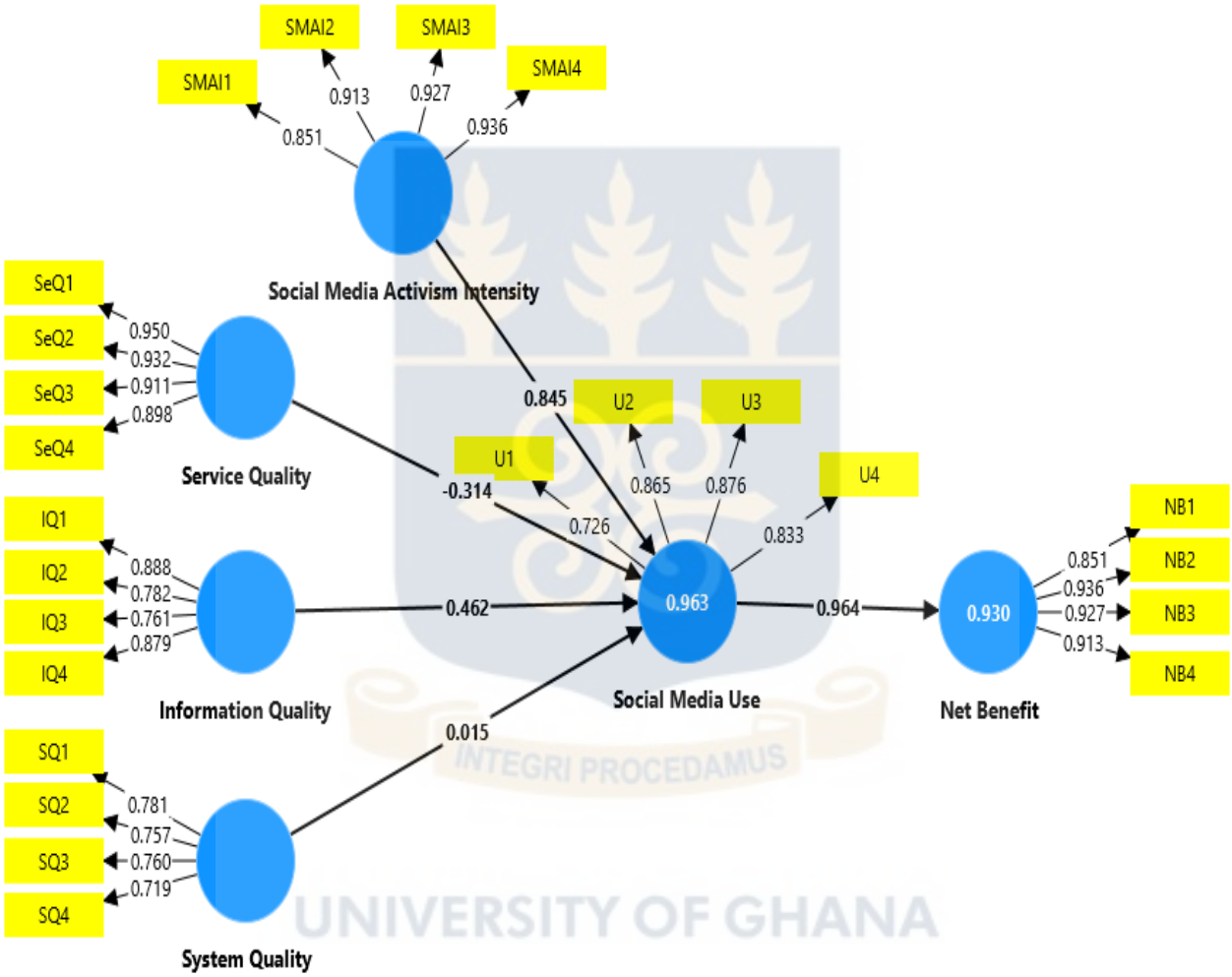

Figure 5.1: Results of PLS Analysis of Indicator Reliability

5.3.2 Internal Consistency Reliability

The next step, following the assessment of indicator accuracy, involves applying Cronbach's alpha to evaluate internal consistency. A high Cronbach's alpha value indicates that the scores of all indicators within a latent variable are consistent in range and meaning (Taber, 2018). The accepted minimum threshold for this measure is 0.70 (Hussey et al., 2025). As presented in Table 5.2, all constructs or latent variables recorded alpha values above this threshold. Nonetheless, Cronbach's alpha has faced criticism for often producing lower values and being a less precise measure of reliability, since it treats items as unweighted (Hair et al., 2019). Consequently, Jöreskog (1971) composite reliability has been proposed as a more suitable alternative for assessing indicator reliability.

Jöreskog (1971) introduced composite reliability as an improvement over Cronbach's alpha, addressing its limitations (Hair et al., 2021a). Unlike Cronbach's alpha, composite reliability recognizes that indicators may have varying loadings (Cheung et al., 2024), making it a more accurate measure of reliability (Kazak, 2021). Generally, higher values signify stronger reliability, with scores between 0.60 and 0.70 deemed acceptable for exploratory studies. Values in the range of 0.70 to 0.90 are considered "satisfactory to good," while values exceeding 0.95 are problematic, as they suggest redundancy among items, which can lower construct reliability (Hair et al., 2021a). In this study, composite reliability values fall between 0.85 and 0.943, indicating reliability levels from "satisfactory" to "good," as shown in Table 5.2. Additionally, Rho_A is regarded as another measure of consistency reliability (Johnson, 2025), with a recommended threshold of 0.70. As presented in Table 5.2, all latent variables in the analysis recorded Rho_A values above 0.70.

Table 5.2 Construct Reliability

Constructs	Cronbach's alpha	Composite reliability (rho_ a)	Composite reliability (rho_ c)	Average variance extracted (AVE)
Information Quality	0.847	0.859	0.898	0.688
Net Benefit	0.928	0.928	0.949	0.823
Service Quality	0.942	0.943	0.958	0.852
Social media Activism Intensity	0.928	0.928	0.949	0.823
Social media Use	0.845	0.858	0.896	0.685
System Quality	0.761	0.755	0.841	0.569

5.3.3 Convergent Validity

Following the assessment of internal consistency reliability, the analysis proceeded to evaluate the convergent validity of each construct. Convergent validity refers to the extent to which indicators of the same construct share a high proportion of variance compared to indicators of other constructs (Lim, 2024). The Average Variance Extracted (AVE) is commonly used to test convergent validity (Cheung et al., 2024). To calculate AVE, the squared loadings of the indicators for a construct are averaged. An AVE value of 0.50 or higher is considered acceptable (Hair et al., 2019), indicating that the construct accounts for at least 50% of the variance in its indicators, thereby confirming adequate convergent validity. As presented in Table 5.2, all AVE values exceeded the recommended 0.50 threshold, demonstrating that sufficient convergent validity was established.

5.3.4 Discriminant Validity

The fourth stage involves assessing discriminant validity. According to Hair et al. (2019), discriminant validity refers to the degree to which a construct is empirically different from other constructs within the structural model. In PLS-SEM, two main approaches are typically applied to test discriminant validity. The first is the cross-loading assessment, which compares the score of each latent variable with all other items (Kazak, 2021). When an indicator loads more strongly on its designated construct than on any other, and each construct or latent variable shows the highest loading with its own indicators, it can be concluded that the constructs are distinct from one another and not interchangeable. Based on Table 5.3, the findings demonstrate that the latent variables exhibit discriminant validity, as they load more strongly on their respective constructs than on others.

Table 5.3 Indicator Item Cross Loading

	IQ	NB	SMAI	SQ	SeQ	SMU
IQ1	0.888	0.531	0.611	0.605	0.412	0.425
IQ2	0.782	0.619	0.619	0.430	0.633	0.676
IQ3	0.761	0.607	0.607	0.510	0.554	0.726
IQ4	0.879	0.788	0.788	0.768	0.811	0.833
NB1	0.723	0.851	0.821	0.289	0.711	0.805
NB2	0.875	0.936	0.816	0.619	0.550	0.888
NB3	0.888	0.927	0.826	0.605	0.632	0.868
NB4	0.769	0.913	0.909	0.407	0.911	0.876
SMAI1	0.723	0.751	0.851	0.289	0.711	0.665
SMAI2	0.769	0.503	0.913	0.407	0.911	0.876
SMAI3	0.888	0.727	0.927	0.605	0.832	0.868
SMAI4	0.875	0.436	0.936	0.619	0.350	0.888
SQ1	0.559	0.436	0.436	0.781	0.509	0.502
SQ2	0.397	0.134	0.134	0.757	0.260	0.208
SQ3	0.472	0.263	0.263	0.760	0.367	0.378
SQ4	0.603	0.567	0.567	0.719	0.645	0.521
SeQ1	0.875	0.936	0.936	0.619	0.950	0.888
SeQ2	0.888	0.927	0.927	0.605	0.932	0.868
SeQ3	0.769	0.873	0.678	0.407	0.911	0.876
SeQ4	0.879	0.788	0.788	0.768	0.898	0.833
SMU1	0.716	0.607	0.607	0.510	0.554	0.726
SMU2	0.723	0.851	0.851	0.289	0.711	0.865
SMU3	0.769	0.866	0.845	0.407	0.868	0.876
SMU4	0.679	0.788	0.788	0.768	0.703	0.833

The Fornell and Larcker (1981) criterion serves as a second approach to assessing discriminant validity. According to this method, a latent variable must share more variance with its own indicators than with any other latent variable. In simpler terms, the Average Variance Extracted (AVE) of each construct should be greater than its highest squared correlation with other constructs. As shown in Table 5.4, each latent variable demonstrates higher variance with its respective indicators than with other variables, indicated by the bolded figures in the table. These bold values also represent the largest numbers across both rows and columns. Based on this evidence, it can be concluded that discriminant validity has been established.

Table 5.4 Discriminant Validity (Fornell-Larcker Criterion)

	IQ	NB	SMAI	SQ	SeQ	SMU
Information Quality	**0.829**					
Net Benefit	0.598	**0.907**				
Service Quality	0.698	0.701	**0.907**			
Social media Activism Intensity	0.707	0.530	0.530	**0.754**		
Social media Use	0.624	0.667	0.867	0.648	**0.923**	
System Quality	0.541	0.464	0.564	0.586	0.739	**0.827**

The Fornell and Larcker (1981) criterion has been criticized by researchers as an inadequate measure for evaluating discriminant validity. Henseler et al. (2015), for instance, argued that the criterion performs poorly when indicator loadings on a latent construct show only slight variation (e.g., ranging between 0.65 and 0.85). As a more reliable alternative, they recommended the Hetero-Trait-Mono-Trait Ratio (HTMT) of correlations as an appropriate method for assessing discriminant validity (Voorhees et al., 2016). Through a Monte Carlo simulation, Henseler et al. (2015) demonstrated the superior performance of HTMT, showing that it achieves much higher sensitivity and specificity levels (97%–99%) compared to cross-loadings and the Fornell and Larcker approach (0.00% and 20.82%, respectively). HTMT is defined as the average correlation between items across constructs relative to the (geometric) mean of the average correlations among items within the same construct (Hair et al., 2019).

***Table 5.*5 Discriminant Validity- Hetero-Trait-Mono-Trait Ratio (HTMT)**

	IQ	NB	SMAI	SQ	SeQ	SMU
Information Quality						
Net Benefit	0.801					
Social media Activism Intensity	0.701	0.678				
System Quality	0.820	0.551	0.551			
Service Quality	0.620	0.432	0.332	0.696		
Social media Use	0.516	0.579	0.479	0.680	0.542	

Issues with discriminant validity occur when HTMT values are too high, with a recommended cutoff point of 0.90 (Roemer et al., 2021). If the HTMT value exceeds this threshold, it indicates a lack of discriminant validity. As presented in Table 5.5, all HTMT values were below 0.90, confirming that discriminant validity was established (Hair et al., 2019). In addition, bootstrapping can be applied to test whether the HTMT value significantly deviates from 1.00 or the set threshold of 0.90 (Roemer et al., 2021). For this study, a "consistent PLS bootstrapping" was carried out using a 0.95 confidence interval, and the outcomes are provided in Table 5.6.

Table 5.6 Bootstrapping for Hetero-Trait-Mono-Trait Ratio (HTMT)

	Original sample (O)	Sample mean (M)	Bias	2.5%	97.5%
Information Quality -> Net Benefit	0.695	0.713	-0.018	-0.338	-0.273
Information Quality -> Social media Use	0.643	0.659	-0.016	-0.232	-0.257
Social media Activism Intensity -> Net Benefit	0.334	0.331	-0.004	0.148	0.505
Social media Activism Intensity -> Social media Use	0.310	0.306	-0.004	0.137	0.464
Social media Use -> Net Benefit	0.881	0.885	0.002	0.062	0.104
System Quality -> Net Benefit	0.089	0.087	-0.002	0.017	0.182
System Quality -> Social media Use	0.082	0.081	-0.001	0.016	0.169
Service Quality -> Net Benefit	0.428	0.452	0.024	0.909	0.816
Service Quality -> Social media Use	0.322	0.342	0.021	0.934	0.949

5.4 Structural Model Assessment

Once the measurement model was positively validated, the subsequent phase involved testing the structural model (Hair et al., 2019). According to Hair et al. (2019), this evaluation follows five key steps, which are outlined and explained in the following subsections.

5.4.1 Assessing Structural Model for Multicollinearity Issues

In evaluating the structural model, the initial step involves testing for multicollinearity. This issue arises when predictors in a multiple regression analysis are highly correlated (Shrestha, 2020). To assess this, the variance inflation factor (VIF) was calculated for each independent construct. A threshold value of 5 or below is considered acceptable to rule out collinearity problems (Kim,

2019). Meeting this requirement implies that the construct is not an almost perfect linear combination of other predictors in the model (Kim, 2019; Hair et al., 2019). As shown in Table 5.7, all VIF values fall below 5, confirming that collinearity was not a concern in this study.

Table 5.7 Multicollinearity Statistics (Inner VIF)

	IQ	NB	SMAI	SQ	SeQ	SMU
Information Quality						2.606
Net Benefit						
Social media Activism Intensity						1.816
System Quality						2.862
Service Quality						3.587
Social media Use		1.000				

Source: Smart PLS

5.4.2 Assessing Structural Model for the Significance of Path Coefficient

Once collinearity is assessed, the next step is to evaluate the significance of the path coefficients between the model's latent variables (Hair et al., 2021b). This is done by applying a bootstrapping algorithm in Smart-PLS with 5,000 subsamples and a two-tailed test at the 10% (0.1) significance level. Bootstrapping, a non-parametric resampling approach, estimates the variability of a statistic by drawing on the variability within the sample data, rather than relying on parametric assumptions, to determine the precision of estimates (Kostanek et al., 2024). Since PLS-SEM does not assume data normality, a non-parametric test through Smart-PLS is required (Hair et al., 2019). The bootstrapping procedure generates t-statistics to evaluate both direct and indirect effects (Hair et al., 2019). Results are presented in Table 5.8. With a 95% confidence interval, the minimum threshold for significance at a 10% level (two-tailed) is a t-value of 1.65 (Hair et al., 2019). As

indicated in Table 5.8, four out of the five hypotheses are supported, each exceeding the critical t-value of 1.65. These outcomes are also illustrated in Figure 5.2.

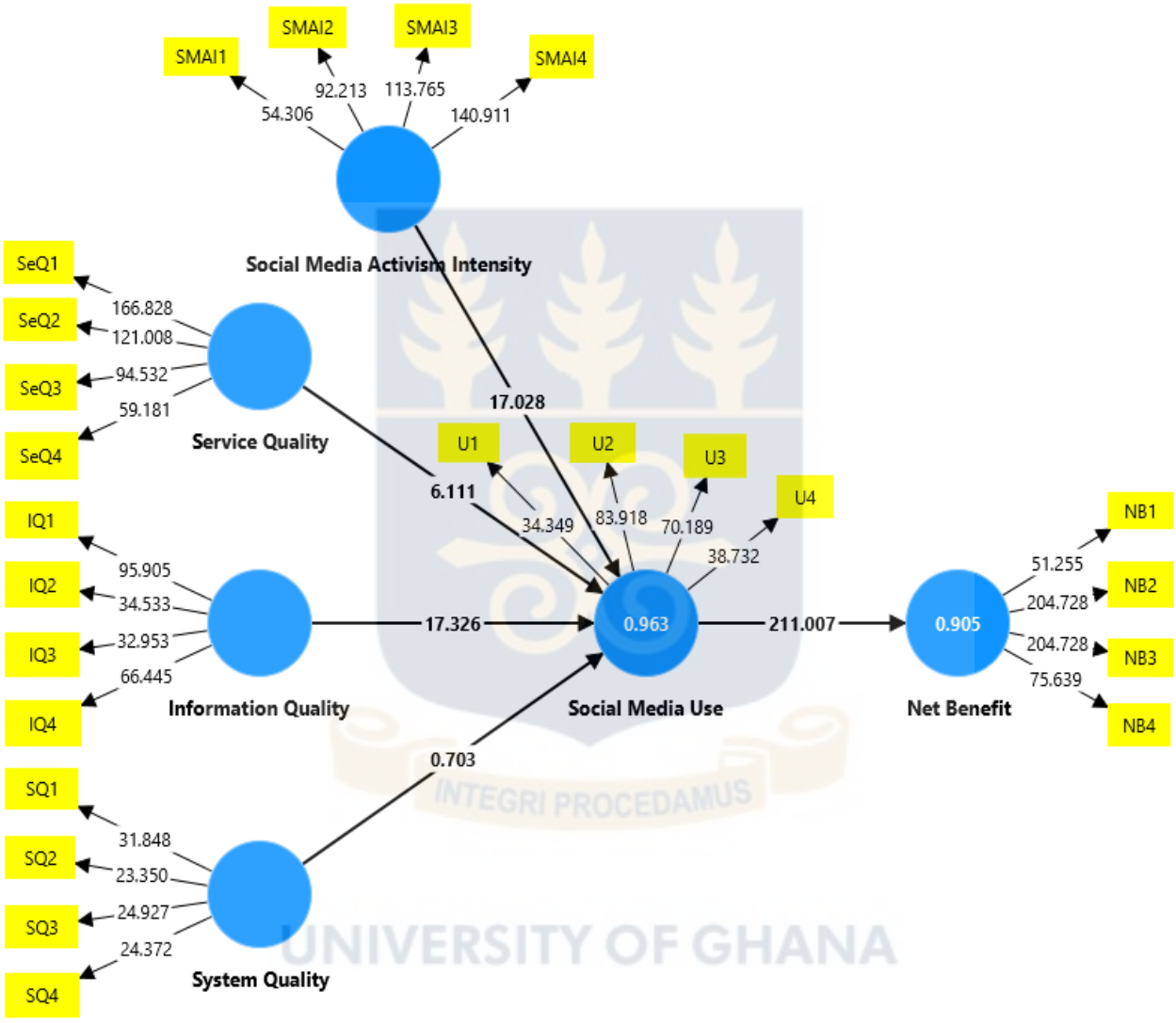

Figure 4.2 Hypothesis Testing for Significance of Path Coefficient

Table 5.8 Direct relationship for Hypothesis Testing

Hypothesis	Relationship	STDEV	T-values	Inference
H1	Social media Activism Intensity -> Social media Use	0.049	17.028**	Supported
H2	Service Quality -> Social media Use	0.052	6.111**	Supported
H3	Information Quality -> Social media Use	0.027	17.326**	Supported
H4	System Quality -> Social media Use	0.021	0.703	Not Supported
H5	Social media Use -> Net Benefit	0.004	211.007**	Supported

[1]

5.4.3 Assessing the Goodness of Fit

After assessing the structural model for the significance of the path coefficients, the model's goodness of fit (GOF) was also examined. This assessment determines whether the model is adequately fitted or poorly specified (Groskurth et al., 2024) and further assists researchers in detecting potential misspecifications within both the measurement and structural models (Goretzko et al., 2023). Among the various criteria, the coefficient of determination (R^2) is the most widely applied (Hair et al., 2019). R^2 reflects the explanatory strength of the model by showing the proportion of variance in the endogenous latent variable explained by the exogenous latent variables (Hair et al., 2021). Its values range from 0 to 1, with higher values indicating stronger explanatory power. Conventionally, R^2 values of 0.25, 0.50, and 0.75 are interpreted as

[1] ** means a critical T-value of 1.65 and above.

weak, moderate, and substantial, respectively (Chin et al., 2020; Hair et al., 2011; Henseler et al., 2009). Specifically, in IS research, Chin (1998) classifies R^2 values below 0.190 as weak, around 0.333 as average, and near 0.670 as substantial. As presented in Table 5.9, the model's R^2 value is 0.963, which is considered highly substantial in IS research. This indicates that the exogenous latent variables collectively explain 96% of the variance in the endogenous construct (Hair et al., 2019).

Table 5.9 Goodness of Fit (R Squared)

Dependent Constructs	R-square	R-square adjusted
Social media Use	0.963	0.961
Net Benefit	0.930	0.929

In PLS-SEM, Henseler et al. (2016) recommended three main criteria for evaluating a model's goodness of fit (GOF): the Standardized Root Mean-squared Residual (SRMR), the Unweighted Least Squares Discrepancy (ULSD), and the Geodesic Discrepancy (GD). Any of these can be applied to assess model fit. For this study, SRMR was selected since it is the most commonly used and widely recognized measure for determining GOF in PLS-SEM, as supported by prior research (Dash & Paul, 2021). According to the guideline, lower SRMR values reflect a better fit, with a value of zero representing a perfect fit. Nonetheless, values at or below 0.08 are generally considered acceptable (Shi et al., 2019; Henseler et al., 2016). Values above 0.08, on the other hand, suggest poor model fit. As shown in Table 5.10, the SRMR for this model was estimated at 0.074, which is below the 0.08 threshold. This finding confirms that the model demonstrates a good fit without issues of measurement or structural misspecification.

Table 5.10 Goodness of Fit (SRMR criteria)

	Original sample (O)
Saturated model	0.036
Estimated model	0.038

5.4.4 Assessing the Effect Size

Following the evaluation of the structural model's goodness of fit (GOF), the subsequent step involves examining the effect size of each path in the SEM using Cohen's (1988) f^2. Effect size indicates whether an independent construct meaningfully influences a dependent construct (Bakker et al., 2019). In other words, it assesses the magnitude of the impact that the independent construct exerts on the dependent construct (Flora et al., 2025). Within Smart-PLS, the f^2 values are generated once the PLS algorithm is executed, and these values are reported in Table 5.11. According to established thresholds, f^2 values ranging from 0.020 to 0.150 represent a small effect, values between 0.150 and 0.350 indicate a medium effect, and values exceeding 0.350 demonstrate a large effect of the independent construct on the dependent construct (Abdul-Salam et al., 2024; Benitez et al., 2020; Gefen et al., 2000). As shown in Table 5.11, constructs such as System Quality exert a small effect on social media use, while Service Quality has a medium effect. By contrast, Information Quality and Social media Activism Intensity exhibit a large effect on social media use. Furthermore, social media use itself has a substantial effect on net benefit.

Table 5.11 Effect Size (f-square)

Constructs	SMU	NB
Information Quality	0.677	
Net Benefit		
Social media Activism Intensity	0.895	
System Quality	0.002	
Service Quality	0.105	
Social media Use		13.224

5.5 Moderating Variables

In line with the study's objectives, the influence of moderating variables on the relationship between the independent constructs (Information Quality, Social media Activism Intensity, System Quality, and Service Quality) and the dependent construct, Social media Use, was analyzed. The moderating variables incorporated into the model are internet accessibility and digital literacy.

5.5.1 Digital Literacy

Bootstrapping was performed in Smart-PLS to examine the moderating role of internet accessibility in the relationship between the independent constructs and the dependent construct. The aim of using bootstrapping is to test whether the moderator affects this relationship by generating more reliable p-values for the interaction effect (Hair et al., 2021). This method is essential for evaluating the significance of moderation effects. The bootstrapping results are shown in Table 5.12. According to the general guideline, t-values must be at least 1.65 (10% two-tailed) to confirm that a moderator significantly influences the relationship between two constructs (Hair et al., 2019).

Table 5.12 Boos-trapping Analysis of Digital Literacy

Relationship	Path Coefficients Original (Digital Literacy)	(|T-values|)	P-values
Service Quality -> Social media Use	-0.028	8.578**	0.022
Information Quality -> Social media Use	0.007	4.163**	0.035
System Quality -> Social media Use	0.048	7.929**	0.016

[2]

5.5.2 Internet Accessibility

Like digital literacy, internet accessibility was also tested using bootstrapping analysis. The results, presented in section 5.13, showed that t-values of 1.65 or higher (at a 10% two-tailed significance level) demonstrate that the moderator has a significant effect on the relationship between the respective variables or constructs (Hair et al., 2019).

Table 5.13 Boos-trapping Analysis of Internet Accessibility

Relationship	Path Coefficients Original (Internet Accessibility)	(|T-values|)	P-values
Service Quality -> Social media Use	-0.062	2.796**	0.013
Information Quality -> Social media Use	0.021	0.376	0.033
System Quality -> Social media Use	0.016	8.489**	0.012

[3]

[2] ** means a critical T-value of 1.65 and above.
[3] ** means a critical T-value of 1.65 and above.

5.6 Chapter Summary

This chapter presented an analysis of data collected in Ghana on the influence of social media activism in disaster and crisis management. The analysis addressed the research objectives of the study by examining how social media is utilized in managing disasters and crises, assessing the effectiveness of social media activism in spreading information, and identifying both the challenges and opportunities it presents within the Ghanaian context. The findings also highlighted the effect of social media use on net benefits, as well as the moderating roles of internet accessibility and digital literacy in shaping the relationship between the independent constructs and the dependent construct.

CHAPTER SIX

DISCUSSION OF RESULTS

6.1 Chapter Overview

The preceding chapter presented the empirical results addressing the study's objectives. This section provides a summary of those findings. The chapter is organized into two main parts. The first section examines how information quality, system quality, and service quality affect social media use, as well as how social media use influences net benefits. The second section focuses on the moderating effects on the relationships between the independent and dependent constructs.

6.2 Impact of Social media Activism on Disaster and Crisis Management

The purpose of this study is to examine the influence of social media activism on disaster and crisis management in Ghana. It also investigates how internet accessibility and digital literacy mediate the relationship between system quality, information quality, service quality, and social media use, in the context of social media activism's role in disaster and crisis response. This dimension has received limited attention in prior research. To address this gap, the study applied the Information System Success model using survey data from 400 social media users engaged in disaster and crisis management in Ghana. Out of the five proposed hypotheses, four were confirmed, while one was not supported. Specifically, information quality, service quality, and social media activism intensity were discovered to significantly influence social media use during disaster and crisis management. In addition, social media use was found to significantly influence net benefit of social media's impact during disaster and crisis management. The outcome of the supported hypothesis can be seen in Table 5.8.

The results reveal a strong positive link between the intensity of social media activism and the use of social media in disaster and crisis management (H1), with a standardized coefficient of 0.049 and a T-value of 17.028. This indicates that greater activism is associated with higher levels of engagement on social platforms during crises. Comparable outcomes have been reported in other contexts. For instance, Simon et al. (2015) demonstrated that social media tools are essential in crisis response, supporting communication between authorities and the public. In the Ghanaian context, social media has played a crucial role in political mobilization and information sharing, further highlighting its relevance in crisis situations (Gyampo, 2017). Nonetheless, issues such as misinformation and information overload remain pressing concerns, underscoring the need for strategies to improve the effectiveness of social media in disaster management (Seneviratne et al., 2024). While some studies (Dong et al., 2020; Ogie et al., 2022) emphasized the potential of social media in crisis communication, others caution against over-reliance due to these challenges (Abboodi et al., 2023; Seneviratne et al., 2024). Therefore, while increased activism intensity boosts social media use during crises, addressing inherent challenges is crucial for optimizing its effectiveness.

In addition, the analysis reveals a significant positive link between service quality and social media use (H2) in disaster and crisis management, with a coefficient of 0.052 and a T-value of 6.111. This indicates that better service quality corresponds to greater reliance on social media platforms during such situations. The result is consistent with prior studies that highlight the importance of service quality in fostering social media engagement in disaster contexts (Seneviratne et al., 2024). For example, Seneviratne et al. (2024) noted that the effectiveness of social media in disaster management is often hindered by challenges such as misinformation, inadequate human resources

to manage platforms, limited trust in authorities and shared information, as well as poor message quality and content. These issues point to the necessity of high-quality services to address barriers and enable effective communication. Likewise, other studies have demonstrated that social media platforms are vital tools for real-time information sharing during natural disasters, and the quality of these services significantly shapes public engagement and the overall efficiency of disaster response (Dong et al., 2020).

Furthermore, Ogie et al. (2022) conducted a systematic review on the application of social media during disaster recovery phases. Their study showed that, although social media is mainly employed in the initial response stages of disasters, it holds significant but underutilized potential in the recovery process. This implies that ongoing improvements in service quality could broaden its usefulness across all phases of disaster management. Within the Ghanaian setting, the strong link between service quality and social media use highlights the need to invest in dependable and efficient platforms to strengthen disaster and crisis management efforts. By maintaining high service quality, authorities can more effectively use social media for information dissemination, relief coordination, and community engagement, ultimately improving disaster resilience.

Based on the stated hypothesis, information quality showed a positive relationship with social media use (H3), with a standardized coefficient of 0.027 and a T-value of 17.326, thus confirming support for the hypothesis. This suggests that the reliability and usefulness of shared information are vital to the effective use of social media in disaster situations. The finding is consistent with previous research highlighting the role of high-quality information in disaster management (Ogie et al., 2022; Seneviratne et al., 2024). For example, Ogie et al. (2022) emphasized that the success

of social media in disaster recovery depends largely on the quality of information provided, as accurate and timely updates can substantially improve response efforts. Likewise, Seneviratne et al. (2024) examined the role of social media in disaster management and identified credibility issues as a major challenge, suggesting strategies to address these concerns and underscoring the importance of information quality. Furthermore, the spread of misinformation, as witnessed during the Los Angeles wildfires, has been shown to disrupt emergency response operations (Leingang, 2025). This highlights the urgent need for reliable information on social media. Consequently, strengthening information quality is essential for ensuring effective disaster and crisis management in Ghana.

The study further revealed that the hypothesis proposing a positive relationship between system quality and social media usage (H4) in disaster and crisis management within Ghana was not supported. This was demonstrated by a standardized coefficient of 0.021 and a T-value of 0.691, indicating that higher system quality does not automatically translate into greater social media use during crises. also highlighted difficulties in incorporating social media into crisis management, pointing to challenges such as information overload and the spread of misinformation, which can undermine its effectiveness regardless of system quality. On the other hand, existing research has emphasized that social media platforms remain valuable in crisis contexts, particularly for disseminating information and engaging the public. For instance, Saroj and Pal (2020) highlighted that social media enables real-time communication during emergencies, enhancing situational awareness and response efforts. The lack of a significant association in this analysis may be attributed to contextual factors like technological infrastructure and user behavior. This suggest that improved system quality alone may not enhance social media use in disaster management.

Future research should explore additional factors, such as user training and strategies to manage misinformation, to better understand effective social media utilization in crisis contexts.

The analysis further reveals strong support for the hypothesis (H5) suggesting a positive relationship between social media use and net benefit, evidenced by a path coefficient of 0.004 and a very high t-value of 262.610 ($p < 0.05$). This indicates that greater use of social media in disaster and crisis management is closely associated with substantial net benefits, including more efficient communication, improved situational awareness, and better resource mobilization during emergencies in Ghana. This finding aligns with prior research demonstrating that social media platforms can drastically improve crisis response by facilitating real-time information dissemination and coordination among emergency responders and affected communities (Alexander, 2013). For instance, Erokhin and Komendantova (2024) revealed that during natural disasters, platforms like Facebook and Twitter enable rapid mobilization of community support and timely alerts, thus mitigating the impact of crises. Additionally, Inusah (2023) highlighted that social media activism not only boosts civic engagement but also translates into tangible benefits in disaster management outcomes. Although Desai et al. (2022) warn that excessive dependence on social media may contribute to the spread of misinformation, the evidence from this analysis indicates that, in the Ghanaian setting, its advantages in facilitating effective crisis communication and coordination significantly outweigh the drawbacks. Similarly, Scherman and Rivera (2021) affirm that digital activism plays a vital role in boosting social media engagement during emergencies, ultimately generating considerable overall benefits. Collectively, these findings highlight the essential contribution of social media to disaster management outcomes and support its deeper integration into crisis response strategies.

6.3 Effect of Moderators on the Constructs

This section examines the moderating effects considered in this study on the relationships between the independent and dependent constructs. Two moderators were incorporated: internet accessibility and digital literacy. The discussion here highlights how these moderators impact the Information System Success model.

The results presented in Table 5.12 reveal that digital literacy plays a significant moderating role in the link between service quality and social media use, with a path coefficient of 0.028 and a T-value of 8.578. This indicates that higher digital literacy levels shape the extent to which service quality affects the use of social media platforms. Within the context of disaster and crisis management in Ghana, the findings suggest that individuals with stronger digital literacy skills are better equipped to utilize social media for communication and information sharing during emergencies. Thus, promoting digital literacy among the population could enhance the effectiveness of social media as a tool for disaster response and recovery. This outcome is consistent with Smith and Storrs (2023), who emphasized that digital literacies empower users to engage more critically with social media content, thereby strengthening their role in disaster management efforts. As such, prioritizing digital literacy initiatives is essential to maximize the potential of social media in disaster and crisis management.

Moreover, digital literacy plays a significant moderating role in the link between information quality and social media use, as shown by a path coefficient of 0.007 and a T-value of 4.163 in Table 5.12. This suggests that individuals with stronger digital literacy skills are better able to

assess the quality of information shared on social media, which enhances their effective use of these platforms, particularly in disaster and crisis management settings. Higher levels of digital literacy provide users with essential critical skills to evaluate and authenticate information, thereby reducing the spread of misinformation and improving the effectiveness of social media in delivering accurate and timely updates during emergencies. These findings highlight the need to incorporate digital literacy into school curricula and community training programs to strengthen the role of social media as a reliable tool for crisis communication and management.

The analysis further reveals that digital literacy plays a significant moderating role in the relationship between system quality and social media usage, as shown by a path coefficient of 0.048 and a T-value of 7.929. This indicates that higher levels of digital literacy strengthen the positive effect of system quality on social media use. The result is consistent with prior studies underscoring the importance of digital literacy in navigating and effectively using social media platforms (Sirlin et al., 2021). For instance, Sirlin et al. (2021) observed that individuals with stronger digital literacy skills are more capable of evaluating information critically, enabling them to make better judgments regarding the accuracy of content. Within the Ghanaian context of disaster and crisis management, digital literacy equips individuals to efficiently access, interpret, and share critical information during emergencies, thereby improving the effectiveness of social media as a disaster response tool. Conversely, limited digital literacy may obstruct effective use of these platforms, increase the risk of misinformation and reduce engagement with reliable content. Thus, enhancing digital literacy is crucial to fully leverage high-quality systems for more effective social media use, particularly in disaster management settings.

Like digital literacy, the analysis revealed that internet accessibility plays a significant moderating role in the relationship between service quality and social media use in disaster and crisis management in Ghana. This is reflected in the path coefficient of -0.062, a T-value of 2.796, and a p-value of 0.013. The negative coefficient indicates that greater internet accessibility reduces the strength of the link between service quality and social media usage. In other words, as internet access becomes more widespread, the direct effect of service quality on social media engagement during crises diminishes, possibly because users value the speed and availability of information more than service quality. The T-value, which is higher than the 1.96 threshold, confirms that the moderation effect is statistically significant and not a result of chance. This outcome is consistent with earlier studies suggesting that wider internet penetration expands access to crisis-related information, thereby lowering the reliance on service quality as the key factor driving engagement (Alexander, 2013). Consequently, policymakers and disaster management authorities should prioritize not only improving service quality but also ensuring reliable and widespread internet connectivity to strengthen the impact of social media in crisis response. Furthermore, strategies should consider how differences in internet accessibility influence public trust and participation in official crisis communication efforts.

Moreover, internet accessibility does not significantly moderate the link between information quality and social media usage in disaster and crisis management in Ghana. This is evidenced by a small path coefficient of 0.021, a very low T-value of 0.376, and a p-value of 0.033. Although the p-value falls below the conventional 0.05 level, the T-value is well below the minimum threshold of 1.65, indicating that the moderating role of internet accessibility is not statistically meaningful. The outcome suggests that differences in internet access have little influence on how

information quality affects social media use during crises. This could be due to relatively uniform internet access across the studied population or the stronger impact of other factors, such as digital literacy and user engagement. Evidence from disaster risk reduction research shows that while high-quality information is vital for crisis communication, internet availability alone does not necessarily strengthen this relationship (Alexander, 2013). Likewise, studies highlight that digital competencies and literacy are often more influential in enabling the use of high-quality information than simple internet access (Inusah, 2023; Seneviratne et al., 2024). These findings suggest that policymakers and disaster management bodies in Ghana should focus more on improving digital literacy and the quality of shared content rather than solely expanding internet access to maximize the effectiveness of social media in crisis communication.

The analysis showed that internet accessibility plays a significant moderating role in the link between system quality and social media use in disaster and crisis management within Ghana. This was evidenced by a positive path coefficient of 0.016, a high t-value of 8.489, and a statistically significant p-value of 0.012, as presented in Table 5.13. The results suggest that improvements in system quality, such as greater reliability, ease of use, and responsiveness of social media platforms, are more effectively converted into higher levels of use when internet access is strong. Put differently, even when a platform offers high system quality, its usefulness in disaster response is only fully realized if users can access it reliably and without difficulty. This finding aligns with prior studies highlighting that strong digital infrastructure and widespread connectivity amplify the benefits of high-quality digital systems in crisis contexts (Alexander, 2013; Seneviratne et al., 2024). Conversely, poor internet access diminishes these advantages, limiting the extent to which system quality promotes effective social media engagement. The implication for policymakers and

disaster management bodies in Ghana is the need to prioritize investment in internet infrastructure to unlock the full potential of robust social media systems for crisis communication and coordination. Expanding internet coverage would complement high-quality platforms by enabling wider accessibility, thereby strengthening resilience and responsiveness in crisis management efforts (Inusah, 2023). This interaction between system quality and internet accessibility highlights the importance of integrated digital strategies for enhancing the role of social media in disaster management.

6.4 Chapter Summary

This chapter discussed the connection between the proposed hypotheses and their impact on social media usage and overall benefits. The objective was to determine the extent to which the hypotheses affected respondents' use of social media in times of disaster and crisis. Furthermore, the moderating effects of digital literacy and internet accessibility on the model were also examined.

CHAPTER SEVEN

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

7.1 Chapter Overview

The preceding chapter centered on analyzing the empirical results and addressing the research questions in connection with the reviewed literature. Consequently, this chapter concludes the study by summarizing the key findings in line with the research objectives, highlighting the implications of the results for research, policy, and practice, and putting forward relevant recommendations.

7.2 General Conclusion

This research evaluated the role of social media activism in disaster and crisis management within Ghana. To achieve the objectives outlined in Section 1.3, the study was guided by the Information System Success model, which helped identify the key factors influencing social media use during disaster and crisis situations. It further explored how these factors affect social media usage and, subsequently, the net benefits derived from social media activism in such contexts. The Information System Success model was selected as it provides a structured approach to assessing the effectiveness of social media platforms during crises. Data were gathered through a questionnaire administered to respondents in Ghana. The study ensured construct validity by examining indicator loadings, while hypotheses were tested by evaluating the significance of path coefficients (Hair et al., 2019).

7.3 Mapping out Research Objectives with Research Findings and Contributions

Research Purpose: The study sought to evaluate the influence of social media activism on disaster and crisis management in Ghana. Table 7.1 provides a concise overview of the findings based on the research objectives, along with a summary of the study's contributions.

7.3.1 Assess the Use of Social media in Disaster and Crisis Management

The results of the study showed that four hypotheses were confirmed, while one was rejected. Firstly, information quality was found to have a positive link with social media usage, suggesting that accurate and relevant information increases dependence on social media during crises, aligning with the findings of Eriksson (2018) and Saroj and Pal (2020). Secondly, service quality also demonstrated a positive association with social media use, indicating that responsiveness and support on social platforms foster greater user engagement (Ogie et al., 2022). Third, the intensity of social media activism was positively associated with social media use, suggesting that activism campaigns motivate wider participation and information sharing, aligning with Seneviratne et al. (2024) and Leingang (2025). Additionally, the hypothesis that social media use positively influences net benefits was strongly supported, affirming that social platforms enhance communication efficiency, collaboration, and crisis response outcomes (Abboodi et al., 2023; Dong et al., 2020). Nonetheless, system quality showed no significant relationship with social media use. This suggests that users prioritize content accuracy and service responsiveness over technical aspects such as speed and reliability, especially in urgent situations, which supports Erokhin and Komendantova (2024) argument that perceived usefulness and relevance often outweigh system performance in determining engagement.

7.3.2 Evaluate the Effectiveness of Social media Activism in Information Dissemination

The results emphasized the significant impact of social media activism in shaping disaster and crisis management. Its speed, wide reach, and interactive nature allow for the swift sharing of vital information across platforms like Twitter, Facebook, and Instagram. This ensures timely updates on safety alerts, evacuation routes, and relief efforts, ultimately enhancing situational awareness among affected populations (Abdulhamid et al., 2021; Cortés-Ramos et al., 2021). The capacity of these platforms to bypass traditional communication delays makes them indispensable during emergencies. Second, social media activism goes beyond communication; it acts as a mobilizing force by galvanizing both local and international communities toward collective action. Through hashtags, live updates, and viral campaigns, activists can draw attention to crises, rallying resources, donations, and humanitarian aid across borders (Weber et al., 2022; Zander et al., 2023). This global support strengthens disaster response mechanisms and fosters accountability among institutions tasked with relief efforts. In addition, the interactive features of social media enable two-way communication, allowing communities to share firsthand information while holding authorities accountable through increased responsiveness. Overall, these findings confirm that social media activism enhances resilience, coordination, and transparency in crisis situations, making it a critical tool for effective disaster management.

7.3.3 Analyze the Challenges and Opportunities of Social media Activism

The results revealed that social media activism has a twofold effect on disaster and crisis management. On the positive side, it serves as a transformative tool by giving marginalized communities a platform to be heard during crises. Through channels like Facebook, Twitter, and

WhatsApp, affected groups can share their experiences, rally support, and hold leaders accountable, which promotes transparency and encourages collaboration among multiple stakeholders (Domalewska, 2019; Inusah, 2023). This democratization of information flow ensures that vulnerable populations are not silenced but rather integrated into decision-making processes during emergencies. On the other hand, the findings underscored critical challenges. First, misinformation and fake news spread rapidly due to the open nature of social media. Such unverified content can create panic, disrupt official communication, and undermine trust in response efforts (Babu, 2022; UNHCR, 2019). Second, the sheer volume of user-generated content complicates monitoring and regulation. With thousands of posts emerging every minute, platforms and authorities struggle to filter harmful or misleading content, creating loopholes for panic-inducing or violent narratives to thrive (Rahman, 2024; Skafle et al., 2022). While social media activism strengthens inclusivity and accountability, its unregulated dynamics necessitate robust strategies to combat misinformation and ensure effective crisis communication (Clark et al., 2021; Mansour & Sleiman, 2020).

Table 7.1 Mapping Research Objectives to Findings and Contributions

Research Objectives	Research Findings	Supporting Literature	Contributions, and Implications
To assess the utilization of social media in disaster and crisis management in Ghana.	From the analysis of the findings, four hypotheses were supported and one was not supported. • First, the hypothesis of information quality being positively associated with social media use was supported.	Eriksson (2018). Saroj and Pal (2020). Ogie et al. (2022).	• This study relied on the Information System Success model to assess the impact of social media activism on disaster and crisis management. Arguably, this is the first study to follow the concept of Information System Success model in

	• Second, the hypothesis of service quality being positively associated with social media use was supported. • Third, the hypothesis of social media activism intensity being positively associated with social media use was supported. • Finally, the hypothesis of social media use being positively associated with net benefit was robustly supported. • Nevertheless, the hypothesis of system quality being positively associated with social media use was not supported.	Seneviratne et al. (2024). Leingang (2025). Dong et al. (2020). Abboodi et al. (2023). Erokhin and Komendantova (2024).	social media activism on disaster and crisis management research. Previous research has largely reviewed literature. Therefore, this study adds to literature by giving a different perspective on social media use using Information System Success model.
To evaluate the effectiveness of social media activism in information dissemination in Ghana.	Social media activism has proven to be a transformative tool in disaster and crisis management by enhancing the speed and breadth of information dissemination, as well as by fostering community engagement and accountability. Literature reviewed revealed that; • immediacy, reach, and interactive nature of social media platforms, such as Twitter, Facebook, and	Abdulhamid et al. (2021). Cortés-Ramos et al. (2021).	• This study further adds to the existing knowledge regarding the impact of social media activism on disaster and crisis management in developing countries especially Ghana. • Furthermore, this study responds to the gaps identified in literature

	Instagram, enable rapid dissemination of crucial information during emergencies. This ensures that affected populations receive timely updates on safety, evacuation routes, and relief efforts. • Social media activism functions both as a communication medium and as a tool for mobilizing worldwide support and coordinating resources.	Weber et al. (2022). Zander et al. (2023).	considering that few studies have been carried out from a developing country context.
To analyze the challenges and opportunities of social media activism in Ghana.	Literature reviewed revealed that; • Social media activism strengthens marginalized groups and promotes collaboration among multiple stakeholders by offering a space for affected individuals to voice their experiences and demand accountability from authorities. • the spread of misinformation and fake news on platforms such as Facebook, Twitter, and WhatsApp represent a critical challenge. The open and unregulated nature of these platforms allows	Inusah (2023). Domalewska (2019). Babu (2022). UNHCR (2019). Skafle et al. (2022). Rahman (2024). Mansour and Sleiman (2020). Clark et al. (2021). Aspi (2018).	• Arguably, this is the first study to be carried out on the impact of social media activism on disaster and crisis management in Ghana. • Furthermore, extant literature has largely focused the role of social media during emergencies. This study, therefore, adds to the limited literature in the area of social media activism impact in disaster situations.

	unverified and false information to circulate rapidly, creating panic and confusion that can disrupt official response efforts. • the overwhelming volume of user-generated content poses a significant regulatory challenge. Social media platforms generate thousands of posts every minute, making it extremely difficult for authorities and platform owners to effectively monitor, filter, and remove content that may incite panic or promote violence during emergencies.		

Source: Author's construction

7.4 Research Contributions and Implications

7.4.1 Implication to Research

Earlier research on the use of social media in disaster contexts has described the area as having significant potential, recommending further studies to generate new insights, particularly theoretical contributions. In response to this call, the present study examined the influence of social media activism on disaster and crisis management in Ghana, a topic that has received little attention in past research. Likewise, limited work has explored the moderating roles of digital literacy and internet accessibility in the relationship between information system quality and social media usage. This study is arguably the first to investigate information system quality alongside social

media use in the context of disaster and crisis management. As such, it contributes valuable knowledge to the existing body of literature in this field.

Moreover, this study drew on the Information System Success model to evaluate system quality factors that influence social media usage in disaster and crisis management. To the best of our knowledge, it represents the first application of the Information System Success model within this research area. Unlike earlier studies that primarily focused on literature reviews, this research contributes by offering a new perspective on social media use through the lens of the Information System Success model.

7.4.2 Implication for Practice and Policy

This research examined the role of social media in managing disasters and crises. It also explored how effective social media activism is in disseminating information. Additionally, the study investigated both the challenges and the opportunities associated with social media activism in Ghana. Therefore, it is essential to highlight the implications of these findings for the disaster and crisis management sector. Findings revealed that Information quality, Service quality, and Social-media activism intensity significantly influence social media use during disaster and crisis management. This is a crucial insight for both practitioners and policymakers aiming to optimize crisis communication strategies.

This highlights that the effectiveness of social media in disaster management depends not only on its technological features but also on the quality of content, the support offered by platforms, and the active participation of users. Similarly, results indicated that system quality did not influence

social media use during disaster and crisis management. This study, therefore, admonishes policymakers and disaster management agencies to continue to invest in maintaining and upgrading the underlying technical infrastructures of social media platforms. This is so because, while current user behavior may not be heavily influenced by system quality, ensuring a high-quality system is a proactive measure that safeguards against future vulnerabilities.

With regard to policy, enhancing information and service quality and promoting active social media activism will optimize crisis communication. However, investment in robust system infrastructure remains essential to future-proof social media platforms against evolving technological challenges. Likewise, policymakers should adopt integrated strategies to address both content quality and technical reliability to ensure resilient, and effective disaster response systems.

7.5 Limitations and Recommendations for Future Research

This study is not without limitations. To begin with, it was conducted in Ghana and relied primarily on Ghanaian participants. Future research should therefore consider extending the scope to other nations, particularly within the developing world. Additionally, comparative studies involving two or more countries could be undertaken to explore whether the role of social media activism in disaster and crisis management varies across contexts. Further, adopting qualitative methods in future research may provide deeper insights into users' perspectives on how social media activism influences disaster and crisis response. Lastly, because this study was limited to Ghana, its findings cannot be universally generalized; however, they may reflect trends common to other countries within the African sub-region.

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APPENDIX A: SAMPLE QUESTIONNAIRE

Dear Participant,

I am an MPhil candidate at the department of Operations and Management Information Systems of the University of Ghana Business School. I am conducting a study on the impact of social media activism on disaster and crisis management in Ghana. I would be glad if you could take some few minutes out your busy schedule to fill this questionnaire. Please note that all information provided will be strictly confidential and will be used for academic purposes only.

Participation in the research activities is voluntary and you can choose to not answer any question or to leave the study at any time. You will not be penalized in any way if you choose not to participate. There is no payment for participating in this research study. Data collected will be stripped off personal identifiers and will be replaced by codes.

For any questions, please contact me through: aiddrisu311@st.ug.edu.gh or my supervisor: eakolog@ug.edu.gh

SURVEY QUESTIONS

PART A. Social media platform usage section (please tick [√]) where appropriate

1. Do you use any social media platform? Yes [ ], No [ ].
2. If Yes, kindly specify the social media platform used? WhatsApp [ ], Facebook [ ], Twitter (X) [ ], Instagram [ ], Other [ ]
3. How long have you used social media platforms? Below 4 years [ ], 5-10 years [ ], above 10 years [ ]
4. How often do you use social media in a week? 1-4times [ ], 5-10 times [ ], above 10 times [ ]

PART B. Demographics (please tick [√]) where appropriate

1. Gender. Male [ ], Female [ ]
2. Age. 18-25 [ ], 26-35 [ ], 36-45 [ ], 46-55 [ ], 56-65 [ ], above 65 [ ]
3. What is your marital status? Single [ ], Married [ ], Divorced [ ], Widowed [ ]
4. What is your level of education? SHS and below [ ] Diploma [ ], Degree [ ], Masters [ ], PhD [ ], No Formal Education [ ], please specify others…….
5. What is your main occupation? Student [ ], Public Service worker [ ], Private Service worker/NGO [ ], please specify others ……
6. Monthly income? 0- GH₵1000 [ ], GH₵1001- GH₵2000 [ ], GH₵2001- GH₵3000 [ ], GH₵3001- GH₵4000 [ ], 4001+ [ ]

PART C. Impact of social media activism on disaster and crisis management (please tick [√]) where appropriate using a 5-point Likert as follows: 1=Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly agree

	Test Item	1	2	3	4	5
	System Quality					
SQ1	Social media platforms are reliable and function without frequent errors.					
SQ2	Social media user interface is easy to navigate.					
SQ3	Social media provides timely and up-to-date information during disasters and crises.					
SQ4	Social media platforms are accessible and available whenever needed.					
SQ5	Security measures are adequate to protect user data and privacy.					
	Information Quality					
IQ1	Information provided on social media is accurate and reliable.					
IQ2	Social media provides timely information during disasters and crises.					
IQ3	Information shared on social media is comprehensive and covers all necessary aspects of disaster and crisis management.					
IQ4	I find the information on social media clear and easy to understand.					
	Service Quality					
SeQ1	Customer support provided by social media platforms is responsive and helpful.					
SeQ2	Social media platforms offer reliable and consistent service during disaster and crisis situations.					

SeQ3	Technical support provided by social media platforms effectively addresses issues related to disaster and crisis management.					
SeQ4	Social media platforms provide adequate resources for stakeholders to effectively use the services during disasters and crises.					
Use/Intention to Use						
U1	I actively use social media platforms to stay informed about disaster and crisis management activities.					
U2	I intend to use social media platforms more frequently for information and updates in the future.					
U3	I find social media platforms to be an essential tool for coordination.					
U4	I am willing to participate in social media campaigns that aim to enhance disaster and crisis management.					
Social-Media Activism Intensity						
SMAI1	I frequently engage with posts related to disaster and crisis management on social media platforms.					
SMAI2	I actively share information about disasters and crises on my social media profiles.					
SMAI3	I participate in online campaigns aimed at raising awareness about disaster and crisis management.					
SMAI4	Social media is my primary platform for advocating disaster and crisis management-related issues.					
Net Benefit						
NB1	Social media activism has improved the overall efficiency of disaster and crisis management in Ghana.					
NB2	The use of social media for activism has led to better coordination among stakeholders during disasters and crises.					

NB3	Social media activism has significantly enhanced public awareness and education on disaster and crisis management in Ghana.					
NB4	Social media platforms have facilitated quicker response times to disasters and crises due to increased activism.					
Internet Accessibility						
IA1	I have reliable access to the internet, which enables me to participate in social media discussions related to disaster and crisis management.					
IA2	The speed and quality of my internet connection are sufficient for engaging in online activism during emergencies.					
IA3	I can afford the cost of internet services necessary for staying informed and active on social media during crises.					
IA4	I have access to mobile internet services that allow me to use social media platforms for crisis management purposes, even when on the move.					
Digital Literacy						
DL1	I am confident in my ability to use social media platforms to share information during a disaster or crisis.					
DL2	I understand how to verify the credibility of information found on social media during emergencies.					
DL3	I am aware of the privacy settings on social media platforms and can adjust them to protect my personal information during crisis events.					
DL4	I know how to use hashtags and tagging to increase the reach of important information during emergencies.					

THANK YOU!!!