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Strategic Management Practices for Responsible Mining in Artisanal and Small-Scale Mining Projects

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Abstract

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Mining Projects

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MSc, University of Mines and Technology, 2010

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Irresponsible management practices in the Artisanal and small-scale mining (ASM) industry result in wasteful mineral resource recovery and utilization. The lack of ASM managers' ability to implement responsible mining inhibits the ability to grow revenues and profits. Grounded in Mckinsey's 7S framework, the purpose of this qualitative multiple case study was to explore strategies ASM managers use to establish responsible mining while also improving revenues and profits. The participants were five ASM managers from five ASM companies in Ghana. Data were collected using semistructured interviews and company public documents such as published annual reports. The four themes from the thematic analysis include corporate social responsibility and stakeholder engagement, human resources management and communication, optimizing mining techniques, and regulatory and portfolio management. A key recommendation is that ASM managers incorporate ore blending as an optimizing mining technique. The implications for positive social change include the potential for ASM managers to create job opportunities, execute corporate social responsibility initiatives, provide social amenities and welfare, and support the economic development of the regional communities.

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Dedication

This doctoral study is dedicated to all those who believed and supported me throughout this journey. Without each of you, none of this would have been possible. Many thanks to my wife, Lydia, for the immeasurable support. To my children Pearl, Philibert, and Pervin, your invaluable support was pivotal in this journey; thank you, and never give up on learning. I hope I have shown you the way. Dare to dream and remember; you can do all things through Christ who gives us strength (Philippians 4:13 KJV). Most of all, never give up on your dreams.

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Section 1: Foundation of the Study

Artisanal and small-scale mining (ASM) has become a primary economic activity for many rural communities within the mining district of Ghana. Many managers and leaders in the industry struggle to implement and maintain responsible mining to meet stakeholder expectations successfully. The lack of management strategy results in wasteful exploitation of the mineral resource, with adverse environmental and social impacts (Bansah et al., 2018). The focus of this study was to discover the strategies that leaders and managers in the ASM industry use to influence responsible mining. This section includes the background of the problem, problem statement, purpose statement; nature of the study; research question, interview questions; conceptual framework; operational definitions; assumption, limitations, and delimitations; the significance of the study; review of professional and academic literature; and transition.

Background of the Problem

The activities of ASM have gained prominence in Africa with substantial economic opportunities (Owusu et al., 2019). Notwithstanding that ASM activity contributes to the economy of many developing countries, the deficient mining and mineral processing techniques by most companies are potential threats to the proper exploitation of the natural resources, workforce, and the natural environment (Owusu et al., 2019). In Ghana, ASM promises substantial economic prospects because many mining towns obtain their livelihood through employment generation (Bansah et al., 2018). According to Ofosu et al. (2020), the mining processes of many ASM companies involve the use of low technology but high labor-intensive for prospecting, extraction,

and processing of the gold. The poor mining practices cause substantial loss of profitability and workforce injury (Bansah et al., 2018).

Bansah et al. (2018) noted that investors in ASM lose about 70% of gold due to lack of technological involvement and inadequate skills. Managers and leaders in the ASM industry should develop strategies for implementing and maintaining responsible mining through the effective management of the industry's internal resources to improve the mining processes for revenue growth (Pokorny et al., 2019). The doctoral research study might provide strategies to help ASM managers and leaders to implement and maintain responsible mining, which could promote the growth of the ASM industry through an improved gold recovery process, thereby increasing revenues. By understanding and exploring responsible mining implementation and maintenance strategies, ASM managers and leaders could improve efficiency in the mining processes to increase profitability and competitiveness and sustainability.

Problem Statement

Inadequate strategic management practices in the ASM industry result in wasteful mineral resource recovery and utilization (Zvarivadza, 2018). The use of substandard mining processes caused the loss of over 70% of gold through ASM activities in Ghana (Bansah et al., 2018). The general business problem was that the ASM activities resulted in low gold extraction and a high workplace accident rate, causing loss of production time and revenue. The specific business problem was that some ASM managers lack strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The target population was five experienced ASM managers from five ASM companies located in Ghana, West Africa, who have successfully implemented and maintained responsible mining to maintain or grow revenues and profits. The implications of positive social change included the potential to improve business performance and profitability, provide employment opportunities, and promote income generation to community members. By implementing and maintaining responsible mining, ASM managers and leaders could improve workplace safety and enhance employees' health, promoting a culture of safety through knowledge sharing and improving the quality of families' lives within the mining communities.

Nature of the Study

Leppink (2017) proposed three methods to address a research problem: qualitative, quantitative, or mixed. I used a qualitative research method for this study. Researchers use the qualitative method to explore the participants' experiences within a collectivistic setting (Øye et al., 2016). Qualitative research was the appropriate method for this study because the goal was to explore ASM managers' strategies and experience in developing, implementing, and maintaining responsible mining operations. Researchers use the quantitative method to examine variables' characteristics or the relationships among variables by using statistical techniques to measure and analyze data (Ren et al., 2019). Examining relationships among variables by testing hypotheses was

not the focus of this study. Mixed method research integrates the qualitative and quantitative methods (Bergh et al., 2017). Mixed methods research was not appropriate for this study because the study's purpose did not require statistical analysis of variables' characteristics or relationships to explore participants' experiences in implementing and sustaining responsible mining practices while also maintaining or growing profits.

The researcher can choose from different research designs in qualitative research, including case study, ethnographic, and phenomenological (Kirschner, 2019). A case study design is an exploration strategy in which researchers explore a specific and challenging phenomenon within its real-life (Martens & Carvalho, 2016). I used a multiple-case study design involving semistructured interviews and document review in this study. The multiple case study design was appropriate for this study because it allowed me to obtain evidence from multiple sites or cases. I used the multiple case study to explore how ASM managers have designed, deployed, and executed successful strategies for improving safety while maintaining or growing the profitability of mining projects. Using a single-case design limits the researcher from gathering evidence from one site and thus provides a limited analytic benefit compared to multiple case studies. In phenomenological design, researchers collect data principally through interviews and participant descriptions of experiencing a phenomenon by focusing on the meanings of participant related personal experiences (Kruth, 2015). The study aimed to gain insight into the experiences of ASM managers and not the personal meanings of experiencing the phenomenon of the ASM project; thus, the use of phenomenological design was not appropriate for this research. The ethnographic research design involves an extended

exploration of cultural groups (Green et al., 2015). The ethnographic design was not suitable for this doctoral research because understanding the group's culture was the focus of the study.

Research Question

The research question for this study was: What strategies do ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits?

Interview Questions

Participants in this study responded to open-ended interview questions in a semistructured process. The interview questions were:

1. What strategies did you design and implement for ensuring responsible business in your organization?

2. How does your organization measure the effectiveness of responsible business strategies?

3. What strategies also worked well to ensure maintaining responsible business to achieve revenue increases?

4. What elements are part of your strategies to deliver ASM projects efficiently?

5. What, if any, concomitant benefits have responsible mining implementation brought to increasing operational efficiencies in your organization?

6. What difficulties do you experience when implementing new business strategies in your organization?

7. How does the organization communicate strategies that will efficiently deliver ASM projects?

8. What additional information can you provide about your organization's strategies for responsible mining that have also maintained or grown revenues and profits?

Conceptual Framework

The conceptual framework of this study was the McKinsey 7S framework. Waterman et al. (1980) developed the McKinsey 7S framework in the early 1980s. Waterman et al. postulated that effective organizational change stemmed from the relationship between seven internal elements within an organization. These internal elements are: (a) systems, (b) strategy, (c) structure, (d) style, (e) staff, (f) skills, and (g) shared values (Waterman et al., 1980). Dyer et al. (2016) mentioned that leaders achieve effective implementation of their organizations' strategy when they ensure proper alignment of the elements in the McKinsey 7S framework with each other. McKinsey's model suggests that a successful transformation depends on leaders' ability to tell a compelling story and model the desired organizational culture to guide employee behavior and company actions (Kaiser, 2018).

The ASM industry is increasingly becoming complex and relies on strategies to implement and maintain responsible mining by effectively managing the industry's internal resources to improve the mining processes' performance and safety for revenue growth (Pokorny et al., 2019). The mining activities present economic opportunities with significant challenges in the mining processes, causing waste of the mineral resource from substandard mining and extraction methods, which require proper management

strategies to manage efficiently (Basu et al., 2015). McKinsey's 7S framework describes the seven elements within an organization, the implication of the interrelationships among the elements, and the generic form which, makes it applicable to evaluate the performance of many businesses (Awino & Adwet, 2017). Using the McKinsey 7S framework could help understand the strategies ASM managers use to implement and maintain responsible mining to improve safety and grow revenues.

Definition of Terms

Artisanal and Small-scale mining: Artisanal and Small-scale mining refers to low technology and labor-intensive mining, processing, and mineral extraction activities (Hilson et al., 2019).

Business performance: Changes in employment, financial turnover, and profitability of an organization through efficient management of resources to hence business growth and sustainability (Nabass & Abdallah, 2019).

Project Management Institute's Project Management Book of Knowledge (PMI PMBOK): A collection of broadly accepted project management practices, processes, terminology, and standards (Tereso et al., 2019).

Responsible Mining: A high technology mining operation that promotes workforce safety, efficient mineral processing, and extraction consistent with healthy communities and the environments to encourage growth and sustainability (Phadke, 2018).

Workplace accidents: Events in the workplace that results in casualties and economic losses (Yang et al., 2019).

Workplace safety: All efforts by an organization to promote employee safety within the workplace as part of the overall operational improvement program (Kabir et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are critical elements in any research because, through assumptions, researchers can accept certain principles as facts in the studied phenomenon that cannot be proven right (Marshall & Rossman, 2016). The assumptions section contains information that helps readers understand the study results (Rule & John, 2015). I made four assumptions in this study. First, I assumed that using a qualitative multiple case study as a research design was suitable for understanding the strategies ASM managers use to implement and maintain responsible mining for improved safety and revenue growth. Second, I assumed that the interview participants had a clear understanding and would answer the interview questions to the best of their knowledge and truthfully. Third, I assumed that I would reach data saturation during the interview and participants would share their company public documents as a secondary data source. Finally, I presumed that the study's findings would provide value-added strategies for ASM managers to implement and maintain responsible mining.

Limitations

Limitations are the internal or external inadequacies found in research with a tendency to question the validity and generalizability of the study (Greener, 2018). The first potential limitation of the study was the sample size. In the study, five research

participants were enough to gather meaningful information to have an in-depth understanding of the phenomenon under investigation but could impact the generalizability of the data across a larger population (Tipton et al., 2017). The sample size of five ASM managers might limit the generalizable of the study findings to the larger Ghanaian ASM population. The second limitation was using the views of ASM managers, which could be different from the views of other senior employees on the strategy to implement responsible mining.

Delimitations

Delimitations are study limits and boundaries set by the researcher that limit the scope and define the parameters of the study (Agnihotri & Verma, 2016). The delimitations included the choices the researcher made about the specific business problem, the study purpose, and the research question (Bernerth et al., 2018). Firstly, the study focused on the ASM industry, limiting the research population to only managers operating in the industry. Secondly, the study explored only strategic management practices to implement and maintain responsible mining. The third delimitation of this study was the geographical location. Therefore, all study participants work in Ghana, excluding other ASMs from other countries.

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Significance of the Study

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Contribution to Business Practice

The findings and recommendations from this study may be of value to the ASM industry. I explored the strategies managers use to implement and maintain responsible mining, which is necessary to promote the growth of the ASM industry through the

improvement in gold recovery to increase revenues and profits (Bansah et al., 2018). The usefulness of the research outcome might include applying the findings and recommendations in developing management strategies for implementing and maintaining responsible mining to improve efficiency in the mining processes. The study findings may contribute to business practice. The findings may increase ASM managers' knowledge of the strategies and the deployment of the essential elements necessary for implementing responsible mining. The use of substandard mining methods poses some challenges to the sustainability of the ASM industry because of the prevalent workforce injuries and wastefulness in gold extraction, which cause loss of revenues and profits (Ajith & Ghosh, 2019). The study's knowledge could serve to provide managers with strategies to deliver ASM projects responsibly to improve business productivity and profitability.

Implications for Social Change

By improving efficiency in mining processes, ASM managers could increase profitability and increase the industry's competitiveness and sustainability. The positive impact of improving the ASM industry's performance through responsible mining involves eliminating wasteful utilization of the mineral resource and enhancing employee safety, thereby improving the quality of life within the mining communities. The leaders and managers of ASMs may adopt the findings to manage a sustainable industry that might create a positive social change by providing employment opportunities to local communities for improved quality of citizens' lives. The ASM activities are a source of livelihood for communities to generate direct employment and serve as the engine for the

growth of other enterprises. Thus, the ASM sector can influence the economic development of rural communities, promote job stability, and provide economic support to both new and existing business enterprises in the mining localities.

A Review of the Professional and Academic Literature

The purpose of this qualitative multiple case study was to explore the strategies some ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. My objective in this literature review was to evaluate the academic level of the research study and identify existing knowledge gaps. Saunders et al. (2019) noted that critical analysis and synthesis of the literature provided the context and theoretical framework for the research relating to strategic management practices and the application by small businesses. Therefore, the literature review was foundational in understanding the phenomena surrounding ASM's success and sustainability. In this literature review, I identified knowledge gaps and illustrated the justification of the research aim.

I used various sources and keywords to source literature for this study. The literature sources included peer-reviewed journal articles, seminal books, and business, psychology, and management databases in Walden University's online library., I used several databases to review peer-reviewed articles, including Emerald Management Journals, ProQuest Central, SAGE Journals, ScienceDirect, Business Source Complete, Google Scholar, ABI/INFORMS Global, and Walden University online library resources. The literature review includes 111 cited references. Resources published within 5 years of the expected graduation year of 2022 (between 2018 and 2022) represent 85.6% of the

sources in the overall study, with 14.4% being older than 5 years. A total of 106

references, representing 95.5%, are from scholarly peer-reviewed sources, with 91

(85.8%) within the last 5 years of my research completion. Table 1 is a summary of the

literature review source. The critical research terms for the literature review included the

McKinsey 7S model, small and medium enterprises, artisanal and small-scale mining,

workplace safety, and project management.

Table 1

Summary of Literature Review Source

Reference type	Total	> 5 Years	Total Within 5 Years of Expected Graduation Date	% within 5 years of 2022
Peer-reviewed journals	106	15	91	85.8
Dissertations	1	0	1	100.0
Books	4	1	3	75.0
Non-peer reviewed journals	0	0	0	0
Total	111	16	95	85.6

The literature review section of this research study included five categories:

Mckinsey 7S Model, including discussion on its hard and soft elements, small and

medium enterprises in Ghana, artisanal and small-scale mining, workplace safety, and

project management practices. I began with an overview of the Mckinsey 7S framework

and the rationale for selecting the framework for the study. Next, I discussed the

alternative conceptual frameworks. Then, I provided an overview of small and medium

enterprises in Ghana, artisanal and small-scale mining, and workplace safety. Finally, I

concluded the review with project management practices focusing on ethical leadership

in project management, project maturity models, and innovations through portfolios of strategically aligned projects.

The McKinsey 7S Framework

Implementing an organization's strategy requires forging alignment between the critical internal elements of the organization (Dyer et al., 2016; Polyanska et al., 2019). Dyer et al. (2016) posited that the McKinsey 7S model represents a tool to implement an effective strategy for an organization, and its departments. The success of the Mckinsey model depends on an organization's capability to follow five steps. The steps are: (a) identify the current state of the organization and misalignments, (b) rank the misalignments based on its importance with strategy, (c) develop plans to create alignment, (d) understand how the change affects other elements in the model, and (e) adjust plans (Dyer et al., 2016). Using strategy, style, and organizational structures to shape shared values is essential for business leaders (Cox et al., 2019).

Dyer et al. (2016) described the McKinsey 7S framework as an interconnection of hard and soft elements. The hard elements are strategy, structure, and system, representing a set of hard levers that managers can quickly pull to create alignment or realignment and manageable by the organization policies. The soft elements include style, staffing, skills, and shared values, influenced by the organizational culture but often challenging to codify (Dyer et al., 2016). The McKinsey 7S framework is ideal for exploring the strategies ASM managers use to implement and maintain responsible mining while maintaining or increasing revenues and profits in Ghana.

Waterman et al. (1980) showed that business leaders should include systems and strategies as value-added elements to the organization. Waterman et al. noted that organizations have a unique blend of seven change variables, including systems, style, skills, staff, and shared values, which, if properly aligned, could improve business performance. Thus, the inclusion of strategy and structure only as elements of a business plan without the appropriate alignment of the other factors is not adequate to improve profitability and business growth (Waterman et al., 1980). Figure 1 shows the McKinsey 7S framework and the interconnection among the elements of structure, systems, strategies, skills, styles, staff, and shared values.

The Hard Elements of the McKinsey 7S Framework

The hard elements of the McKinsey 7S framework are strategy, structure, and system, and represent the physical components of the internal organization elements (Dyer et al., 2016). Fajartriyani et al. (2019) mentioned that hard elements are easy to identify, define, and manage. Mamun et al. (2020) maintained that the hard elements are tools and processes that management can directly influence to facilitate the implementation of business strategy. Reviewing the hard elements of the McKinsey 7S framework could provide a better understanding of the application of the conceptual framework to explore the strategies to implement and maintain responsible mining in the ASM industry.

Figure 1

Mckinsey 7S Model
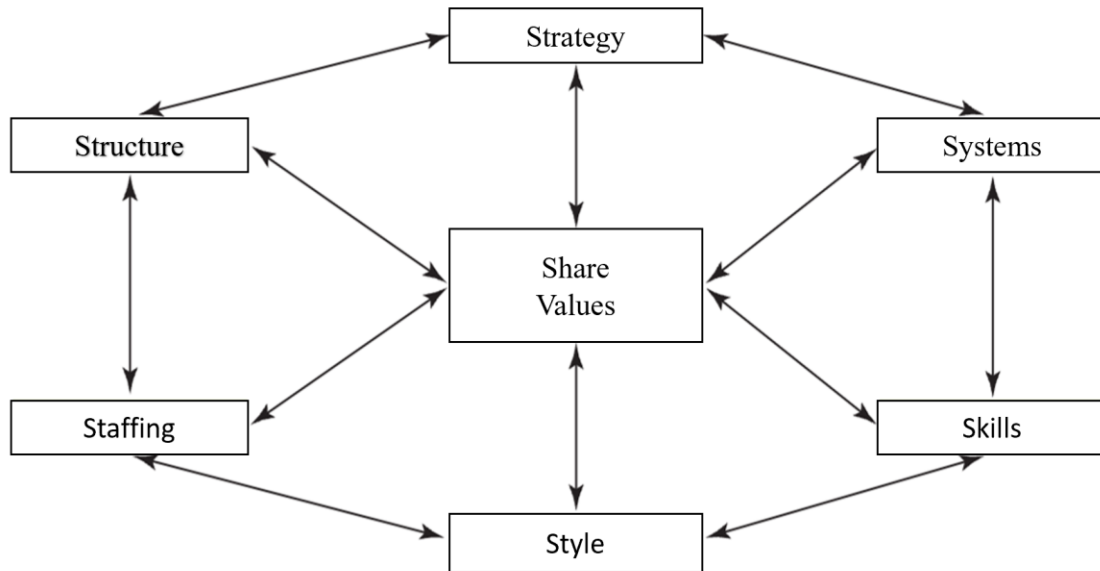
Note. The McKinsey 7 S Model: structure, strategy, and system form the hard elements that managers can use to create alignment, or realignment. The style, shared value, staffing, and skills form the soft element. From Dyer, J. H., Godfrey, P., Jensen, R., & Bryce, D. (2016). Strategic management: Concepts and tools for creating a real-world strategy. John Wiley & Sons

The Strategy Element. The strategy is the plan, process, and related activities that create and sustain a competitive advantage for a firm (Dyer et al., 2016). The strategy allows an organization to focus on what to achieve and how to get there. Because strategy considers an organization's current state and how to reach the expected future state, it might provide managers with direction to achieve their goal, eliminating non-value-adding processes in its operations. Fajartriyani et al. (2019) argued that a business strategy articulates a long-term plan of an organization that reinforces its strong vision, mission, and values. The goal of any organization is to achieve excellent performance

through effective strategy implementation, to stimulate organizational growth and sustainability. Fajartriyani et al. noted that business strategy must align well with other elements to achieve a result. The key in the McKinsey 7S model is not to establish whether a company has formulated a great strategy, but creating its alignment with other elements is critical.

Waterman et al. (1980) postulated that strategies are actions and approaches that a company uses in response to or anticipate changes in the external environment to create a unique value to improve performance. Consequently, a strategy is a critical element and a concern in many business situations to succeed in a volatile and competitive business landscape (Waterman et al., 1980). The essential goal of every company is to achieve excellent performance, and strategy is the driving force to perform well. Therefore, selecting the appropriate is necessary for business sustainability and maintaining competitiveness. An organizational strategy must be evident to employees to achieve the business objective. Sheehan and Powers (2018) argued that business strategy must relate to the firm's value proposition to its stakeholders, the processes, and the human resource needed to deliver the value proposition and profitability target. The ASM industry involves critical stakeholders such as governmental agencies, local community members, and employees. Effective business strategy must consider the interest of the key stakeholders to obtain a social license essential for a proper operation.

The Structure Element. Dyer et al. (2016) noted that structure is the organizational arrangement that divides labor and tasks into separate units and defines the reporting relationship. Structure connects the subdivisions of hierarchy and management

style to effectively align the human resource within the organization to the business goals (Cox et al., 2019). Therefore, structure controls the information flow from one level of the organizational hierarchy to the other, and coordinates various work roles and responsibilities. Effective structural planning motivates employees by addressing employee challenges such as workplace safety and developmental needs to support a company's strategic goals (Mamun et al., 2020).

Dyer et al. (2016) stated that some organizations adopt a matrix structure where business leaders give significant decision-making authority and responsibility to more than one manager. The matrix arrangement considers the assumption that managers play critical roles in creating and delivering the organization's overall goal (Dyer et al., 2016). Though the proven usefulness of matrix organization is often unclear, Vashisth and Sharma (2021) maintained that matrix structure enhances organizational performance, improves coordination, internal collaboration, and the development of connecting tasks. In a complex business environment, organizations adopting a matrix style may help improve efficiencies within the functional groups while maintaining the core structure.

Project-based organizations practice organizational forms based on temporary teams created to perform particular tasks and dissolve after achieving the established goals (San Cristóbal et al., 2018). San Cristóbal et al. indicated that the convolution of the organizational structure depends on the project complexity. Simple projects may require a limited number of stages and specializations with modest organizational structures, whereas more intricate projects may need various steps and specialties (San Cristóbal et al., 2018). Bonanomi et al. (2020) argued that organizations use formal and informal

organizational structures. The formal structures are responsible for determining and assigning roles and responsibilities and information dissemination and decision-making, while informal organizational structures comprise those roles and relationships created informally and unofficially and arising outside the formal organizational structure (Bonanomi et al., 2020). The interaction between these organizational structures enhances business performance to increase project success (Wang et al., 2018). Bonanomi et al. posited that networked structures are an emerging trend in organizational design and management and have more benefits than conventional hierarchical structures. Based on Bonanomi et al.'s assertion, ASM managers and leaders implementing responsible mining could adopt the network organizational structure to increase interaction between the levels within the mining and mineral processing value chain to improve performance.

The System Element. Systems are the processes and procedures of the company that reveal the business' daily activities and decision-making. Dyer et al. (2016) considered systems as mechanisms and policies that coordinate and control the work of the different units of the organization. The system category includes information systems, communication, procedures, performance evaluation, and methods for improving the efficiency of project execution (Bansah et al., 2018; Dyer et al., 2016). The system element includes formal procedures for identifying, measuring, controlling, and monitoring an organization's processes (Waterman et al., 1980). Awino and Adwet (2017) demonstrated that systems are instruments that organizations use to implement

business strategies. Organizations achieve effective strategy implementation using supportive systems to monitor and control processes.

System failure in an organization leads to poor strategy implementation (Awino & Adwet, 2017). Waterman et al. (1980) contended that business leaders should review their procedures and processes to enhance successes in the business plans. Dyer et al. (2016) noted that information systems such as inventory control strengthen the supply chain management to support decision-making and improve productivity. Waterman et al. mentioned that system reflects the state of an organization. An organization that intends to practice responsible mining must invest in systems that will change the internal mechanism to meet its objective. Investment in employee training, mining equipment, workplace safety, environmental stewardship, and developing a process to guide the planning and implementation to transform the organizational culture would be critical. Without a change in the system, ASM managers will be unsuccessful when implementing responsible mining (Bedu-Addo et al., 2019).

To effectively implement policy to guide system change in an organization, Tang et al. (2017) proposed an eight-step policy implementation process:

1. background analysis: analyzing the environment, resource distribution, capacity, and interaction of system members;

2. goal setting: setting objectives and indicators for evaluation;

3. agent identification: identifying agents who execute policies and agents who control policy implementation;

4. decision of main policy: forming core items of the central strategy that execution agents implement after analyzing and balancing responsibilities among system members;

5. decision to support policies: making arrangements for supporting policies such as payment and fiscal investment, which would potentially affect policy outcomes after considering the impact and costs involved for other administrative departments;

6. power-gaming: games analysis among different system members, including policy-making departments, supporting departments, and execution and regulatory agents;

7. feedback: receiving and absorbing feedback information from various members, then repeating steps 3-7 until an equilibrium appeared several rounds later; and

8. control: comparing the predicted policy effect with the designed goals.

Mafuta (2020) reiterated that the organizations design systems to effectively respond to emergency situations. Organizations incur huge losses when there are disruptions in the systems, as such interruptions negatively impact performance leading to loss of productivity.

The Soft Elements of the McKinsey 7S Framework. The soft elements of the McKinsey 7S framework are style, staffing, skills, and shared values (Cox et al., 2019). The soft elements of the McKinsey 7S framework are more complex to manage than the hard elements and require some managerial effort to use them effectively (Cox et al., 2019; Waterman et al., 1980). Mamun et al. (2020) indicated that the soft elements are

challenging to measure because of their intangibility. Organizational culture can influence the soft elements more than the hard elements (Mamun et al., 2020). The soft elements fall within the purview of an organization's human resource management process and are needed to stimulate business success (Cox et al., 2019).

Within the ASM industry, the soft elements of style, staff, and skills are critical in orchestrating change to achieve desirable results because they demonstrate leadership quality. Successful organizations align business strategy with the soft elements of the McKinsey 7S model to improve performance through creativity and innovation, which results from a change in employee behavior, job satisfaction, motivation, and reward system (Kim, 2018; Thuan & Thanh, 2019).

The Style Element. The style element represents the interpersonal relationships between people in the organization. It involves how the top-level managers manage a company, their actions, and their symbolic value (Dyer et al., 2016). Waterman et al. (1980) identified two main attributes of style: its ability to change organizational performance and strategic orientation through cultural change. Organizations adopt styles consistent with their traditional corporate culture as a business strategy to gain or maintain competitiveness. A good management style should promote employee motivation, create a culture that enhances performance, and increase revenues and profits. Some management styles may include the leadership type that the organization's managers demonstrate as part of the strategic management practices to achieve business objectives (Lappalainen et al., 2020).

Because the ASM industry occurs in a diverse cultural environment, the management style in the mining sector is critical to undertaking successful mining projects. The style element enables managers to analyze employees' expectations, group dynamics, teamwork, conflict resolution, and personal interests (Dahlgaard-Park et al., 2018). Management styles thus influence motivation and collaboration among employees and promote organizational effectiveness in executing ASM projects. The ASM managers might include the style element to enhance the mining project's success within the diverse cultural setting.

The Staffing Element. The staff element represents the human resource management processes such as recruiting, hiring, training, performance measurement, promotion, and compensation of human capital in the organization (Dyer et al., 2016). Tien et al. (2019) affirmed that employees are organizations' critical assets, implying that leaders must consider their recruitment and retention as essential components in organizational successes. The staff element represents the design of the human resources system in organizations for the smooth execution of business objectives (Javied et al., 2019). Managers' consistent engagement with staff within the organization creates the condition for active alignment of the other elements in the McKinsey framework (Mafuta, 2020). The success of any strategy implementation depends on the human resource capital of the organization. The staff element for an organization includes creating a talent management strategy that incorporates succession planning, training, compensation, and management systems to build the human capital needed in business strategy implementation to meet the changing demands in the business landscape

(Jurksiene & Pundziene, 2016). Lack of a formalized staffing system in the ASM industry leads to a high incidence of the casualness of employment despite government attempts at their formalization (Yankson & Gough, 2019).

The Skills Element. Skills are the abilities of individuals within the organization and how the firm has combined those individual talents to build capabilities to create a competitive advantage (Dyer et al., 2016). The organization demonstrates the relationship between skills and staffing in the hiring process. Companies either hire people who have the skills they need or develop workers in-house through training. The ASM industry requires human capital with the requisite skill set to implement and maintain responsible mining. Kaledi et al. (2021) noted communication, leadership, innovation, and tacit knowledge transfer skills are crucial in the business strategy implementation process to achieve organizational goals.

Waterman et al. (1980) mentioned that skills are soft elements of the McKinsey 7S framework and allow capturing a company's crucial attributes. Organizations' dominating qualities that define their uniqueness and business competitiveness reveal the application of the skills element. The skills element demonstrates the organizations' ability to revolutionize to address the issue related to discontinuities in business conditions (Waterman et al., 1980). In a rapidly changing business environment, skills drive organizations' competitiveness and innovation capacity (Vătămănescu et al., 2018). ASM managers investing in the training and development of employees on the implementation of responsible mining strategies enhance performance to improve efficiencies leading to increase revenues and profit.

The Shared Values Element. The conceptual meaning of shared values in the McKinsey 7S framework involves a set of values and aspirations of an organization (Waterman et al., 1980). Shared values are thus norms and standards that guide employee behavior and company actions. Dyer et al. (2016) considered shared values as priorities, values, and virtues that members of the organization see as important. The term shared values is a construct underlining practices that ensure efficient productivity through the collaborative effort of organizations' internal and external stakeholders, to improve the relationships between business and society by aligning social benefits with corporate profit (Black & La Venture, 2018). There is a relationship between organizational performance and the share value element in the Mckinsey 7S model, which defines the corporate culture and practical value in business strategy implementation.

Awino and Adwet (2017) established that organization's shared values influenced the success of the strategy implementation process; therefore, the business strategy implementation should align with the organization's culture. The application of responsible mining in the ASM sector will require managers and leaders to create an enabling work environment to grow employees' support in demonstrating shared values while implementing the business objective (Giuliani et al., 2021). Shared value motivates employees to adapt to change, which is critical to improving business performance.

Alternative Conceptual Frameworks

The McKinsey 7S framework is the conceptual framework for this study. Waterman et al. (1980) considered the McKinsey 7S framework as an all-inclusive approach that contains hard and soft elements whose alignment with organizational

strategy achieve business excellence. The critics of the McKinsey 7S framework view the model as an internally focused tool and lacks variables that deal with the external environment and performance management (Awino & Adwet, 2017; Polyanska et al., 2019). An alternative management tool for attaining organizational excellence other than the Mckinsey 7S framework is the 4P model. Other strategic tools for achieving organizational excellence are the causal model of organizational performance and change, the comprehensive model for diagnosing organizational systems, and Leavitt's diamond model.

4P model. Many management theories exist to solve business problems. The 4P theory is an alternative strategic management model for achieving organizational excellence similar to the McKinsey 7S and has four interconnecting elements (Dahlgaard-Park et al., 2018). According to Dahlgaard-Park and Dahlgaard (2007), organizations achieve business excellence through an active interaction of people, partnerships, processes, and products (the 4Ps). The 4P model eliminates the tendency of organizational leaders to ignore the human aspects and soft dimensions of organizational realities when implementing management models to achieve excellence (Dahlgaard-Park & Dahlgaard, 2007). Dahlgaard-Park et al. noted that the 4P model gives equal attention to organizations' soft dimensions to address leaders' tendency to focus more on the hard elements while ignoring the soft elements. By ensuring the interconnectivity of leadership style, people, and processes, organizational leaders can create a congenial work environment that enhances business performance (Dahlgaard-Park et al., 2018).

Saba et al. (2021) strengthened the adoption of the 4Ps as a conceptual model for examining employee satisfaction. Liewendahl and Heinonen (2020) indicated that respect for employee and continuous improvement reflect an organizational culture and represent the belief that employees are an organization's most valuable asset and pivotal to building a culture of constant improvement that simulates increased productivity. When managers and leaders engage their followers, it creates a condition that increases employee satisfaction (Qi & Wang, 2018).

Corporate leaders should avail themselves of existing tools and strategies and integrate them into crucial work processes and organizational culture. The interdependence of tools and processes with work culture helps employees give meaning to their work and organizational life and inspire efficiencies (Polyanska et al., 2019). Bantha and Nayak (2020) asserted that a performance management system that incorporates leadership, strategy, people, resources, processes, products, and services improves organizational performance leading to sustained excellent results. Researchers have indicated that workplace spirituality strongly influences organizational performance (Lata & Chaudhary, 2021; Jirangkul, 2020). Employee finding value and meaning in their work enables excellence and thus increase productivity. While the P4 model focuses on the interaction of people, partnerships, processes, and products, McKinsey 7S framework considers the alignment of organizational structure and strategy with other internal elements to improve organizational performance and hence was ideal as the conceptual framework for this study.

Other strategic tools for achieving organizational excellence are the causal model of organizational performance and change, the comprehensive model for diagnosing organizational systems, and Leavitt's diamond model.

Burke-Litwin Causal Model. The Burke-Litwin causal model of organizational performance and change describes the outcome of work performance, effort, and achievement, including productivity, employee satisfaction, and service quality (Olivier, 2018). The model involves 12 performance indicators whose causal linkage improves organizational performance (Amirkhani et al., 2019). The variables are external environment, leadership, strategy, organizational culture, management practices, structure, systems, work unit climate, skills, motivation, individual needs and value, and individual and organizational performance (Olivier, 2018). The Burke-Litwin causal model and McKinsey 7S have common elements of strategy, structure, system, style, and skills, but they differ in context. The Burke-Litwin causal drives performance and change from the effect of causality between the elements (Sayyadi, 2019). In contrast, the McKinsey S7 model drives performance through effective interconnectivity of the seven elements (Polyanska et al., 2019).

Cummings and Worley's Comprehensive Model. Cummings and Worley's comprehensive model for diagnosing organizational systems links the input of environment with interdependent elements of the design components such as strategy, technology, structure, climate, human resource management, and management processes to achieve organizational effectiveness (Král & Králová, 2016). The model expands on the McKinsey 7S framework by linking an organization's internal elements with external

environmental factors (Král & Králová, 2016). Using the comprehensive model for diagnosing organizational systems, organizations can assess the current state and understand how to improve performance (Olivier, 2018).

Leavitt's Diamond Model. Leavitt's diamond model focuses on four success factors - people, task, structure, and technology - whose effective interaction is critical to successfully implementing change processes (Blumberg et al., 2019). As with the McKinsey 7S model, any change in one of the four elements of Leavitt's model will directly affect all the other factors and necessitate an adjustment to accommodate the change.

McKinsey's 7S framework's ability to identify the seven success factors within an organization and its generic form, which makes it applicable to evaluate the performance of many businesses (Awino & Adwet, 2017), drives its appropriateness to my study. Using the McKinsey 7S framework could lead to understanding the strategies ASM managers use to implement and maintain responsible mining to increase revenues and profits. Table 2 shows the components of different business excellence models.

Table 2

Summary of Business Excellence Models

Business model	Components	Relationship between components
The McKinsey 7S (Waterman et al., 1980)	Structures, strategies, systems, skills, staff, style, and shared values	Interdependence and value creation from constant revision
The 4P model (Dahlgaard-Park & Dahlgaard, 2007)	People, partnership, processes, and products	Quality management, cultural changes, innovation, and communication
The causal model of organizational performance and change by Burke and Litwin (Olivier, 2018)	Environment, leadership, mission and strategy, culture, performance, structure, climate, systems, management practices, task and individual skills, motivation, individual needs, and values.	Causality and adaptation to the external environment by a collaborative effort
The comprehensive model for diagnosing organizational systems by Cummings and Worley (Král & Králová, 2016)	Structure, strategy, environment, technology, human resource management, climate, and processes	Interdependence and inclusion of technology as an essential factor
Leavitt's Diamond model (Blumberg et al., 2019)	Structure, task, people, and technology.	Interdependence

Overview of Small and Medium Enterprises (SMEs) in Ghana

SMEs contribute significantly to the growth of Ghana's economy. However, emerging trends in the global business landscape threaten the survival of many SMEs and necessitate a paradigm change (Appiah et al., 2019). Thus, the SME owners who do not implement and maintain successful and sustainable strategies are at risk of failure (Ju et

al., 2020). Vătămănescu et al. (2018) posited that rapid changes and intense competition in the current business environment due to globalization make many SMEs vulnerable. The phenomenon requires leaders of small businesses to devise strategies and adopt new sources of sustainable competitive advantage (Vătămănescu et al., 2018). Researchers have identified poor management strategies, lack of financing support, difficulty in exploring technology, and lack of innovation as factors impacting the success of small businesses (Cantonnet et al., 2019; Kawahara et al., 2018). To survive the threats, SME leaders and managers should adopt effective change management strategies that will enable them to improve business processes and enhance productivity.

According to Ogbari et al. (2018), SMEs require an alignment of business strategies with proper management practices to succeed in a complex business environment. To achieve this objective, some managers of SMEs have explored new advances in project management practice aligning them with an initiative that considers value creation as a primary focus (Dalcher, 2016). The use of project management practices has helped SME managers to execute business strategies for their organizations. In a rapidly changing business environment, efficient management of innovation projects is essential for the success of any company. Organizational leaders link innovation projects with strategic goals to identify and leverage opportunities to drive innovation (Titarenko et al., 2018).

In a study of factors contributing to SME's financial incapability, Obeng and Blundel (2015) found revenue losses to be a critical factor for the nonuse of financial support provided by two external support agencies in Ghana (National Board for Small-

Scale Industries and Empretec Ghana Foundation. Due to lack of financial injection, many SME leaders and managers in Ghana resort to substandard and outdated methods in their processes that dent business efficiency leading to sizable revenue losses (Bansah et al., 2018). Xiang et al. (2019) noted that the lack of access to financial support affects investment in innovation and technology and forces many SMEs to maintain the use of a traditional method. Xiang et al. stated that governance structure within the SME sector drives innovation and the use of technology. In a study to examine the extent of innovativeness of family-owned businesses (FBs) and non-FBs, Xiang et al. mentioned that FBs invest less in innovation and use of technology. However, FBs are more efficient in using innovation resources than non-FBs and are more creditworthy. The ASM industry in Ghana could leverage this attribute of family ownership SMEs to access the needed financial capital to implement responsible mining to increase revenues and profit and sustain the sector.

Artisanal and Small-Scale Mining

ASM activities have gained prominence in Africa with substantial economic development opportunities (Owusu et al., 2019). Although the ASM activity contributes to the economy of many developing countries, the deficient mining and mineral processing techniques by most companies pose severe threats to the utilization of the natural resources, workforce, and natural environment (Owusu et al., 2019). Pokorny et al. (2019), in a qualitative study of the activities of ASM in Northern Burkina Faso, indicated a negative environmental impact and human health issues. The significant effects on the ecosystem and human health include high exposures to mercury and other

heavy metals, occupational injuries and noise exposure, deforestation, land degradation, and water and sanitation issues (Pokorny et al., 2019).

In Ghana, ASM promises substantial economic development prospects because citizens in many mining towns obtain their livelihood through employment opportunities (Bansah et al., 2018). The investment in the ASM has increased in Ghana due to the emergence of technology and workforce reduction by some large-scale mining companies. Employees impacted by workforce reduction in large-scale mining companies engage in the ASM to apply the knowledge and skill they gained from their previous employment, while others view the activities as alternative employment opportunities (Zolnikov, 2020). The drive has advanced the mining and mineral extraction processes from using simple tools such as pickaxes, chisels, and shovels to massive pieces of machinery such as excavators, trucks, and dredging machines (Yankson & Gough, 2019). Ofosu et al. (2020) argued that the mining processes of many ASM companies involve the use of low-level technology but high labor-intensive for prospecting, extraction, and processing of the gold. The poor mining practices by ASM cause substantial loss of profitability and workforce injury (Bansah et al., 2018).

Bansah et al. (2018) noted that investors in ASM lost about 70% of gold in artisanal and small-scale gold mining (ASGM) due to low-level technology and inadequate skills. The wastefulness of the mineral extraction processes from substandard methods by ASM has benefited some large-scale mining companies in Ghana by extracting gold from the residue of ASM mining fields (Bansah et al., 2018). Many opportunities thus exist for ASM to increase profits. ASM leaders and managers who lack

strategies to implement and maintain responsible mining may limit the future growth and sustainability of the organization.

The formalization of the ASM sector is critical to improving competitiveness. Inadequate supervision by regulatory agencies promotes low-level technology in the ASM sector (Kinyondo & Huggins, 2020). The large-scale mining companies in Ghana work under strict regulatory policies that ensure international best practices in mining and processing of mineral resources, thereby reducing wasteful utilization of the mineral resource and increasing revenues and profit (Ofosu et al., 2020). For example, Ghana's environmental policy requires mining companies to undertake an environmental impact assessment before companies get approval to execute mining projects (Bedu-Addo et al., 2019). Ofosu et al. (2020) posited that the economic importance of the ASM sector to livelihoods had necessitated the need for the enforcement of resources policy to ensure the proper management of the industry.

Workplace Safety

Workplace safety is a significant area of concern for organizations. Many business leaders have shown interest in employee safety at the workplace due to the profound economic impact a safe workplace has on business (Kim & Jung, 2019). For example, workplace accidents result in the loss of productive work hours by affected employees and cause mental and physical damages, which have a lifetime devastating effect on the victims and impact their livelihood (Kim & Jung, 2019). Singh and Misra (2020) noted that managing employee safety in the workplace is a critical obligation because organizations that value workplace safety improve productivity. Hald (2018)

established that employees are motivated in a safe work environment and involved with their organizations emotionally, which substantially improves performance. Thus, organizations risk losing productivity and profitability if employees work under unsafe conditions. Wiengarten and Longoni (2018) argued that poor workplace safety practices cause economic and productivity losses due to employees' compensation payments, medical expenses, and costs for legal services.

ASM activity exposes many workers to hazards and accidents and requires leaders and managers to develop strategies to reduce the threats and prevent accidents (Roelen et al., 2018). Misiurek and Misiurek (2020) considered an organization's leaders, employees, tasks, and work environments as areas to focus on when examining workplace safe. The leadership factor of organizational health and safety involves the skills, style, and experience of the leader in confronting the safety issues in the work environment (Kim et al., 2020; Lappalainen et al., 2020; Mollo et al., 2019). Leaders create work conditions where stakeholder collaboration flourishes to enhance performance. Lappalainen et al. stated that the transformational leadership styles of organizations' leaders directly impact workers' safety attitudes and awareness and reinforce their behavioral safety. With skill and experience, the leadership also creates the working conditions through developing safety protocols, which workers follow to achieve a safe workplace (Zhang et al., 2020).

The employee factor of organizational health and safety considers the employee's wellbeing, food and nutrition, physical exercises, mental alertness, training, and development (Guardado & Ziebarth, 2019; Petitta et al., 2019). Studies show that

employees' lack of skills poses a hazard and increases safety risk at the workplace (Shen et al., 2017). Therefore, business managers should provide relevant training for workers to control unsafe practices. Workers' involvement in safety issues is key to safety incident prevention. According to Mrugalska et al. (2016), workers' participation in occupational safety and health planning generally produces more significant outcomes. Consequently, leaders and workers must engage in safety issues regularly.

The task relates to job content. Risk assessment of various activities exposes different risks that managers must recognize and develop mitigation strategies. Ajith and Ghosh (2019) assessed the risk levels of various tasks in the mining industry and concluded that some risk factors and the likelihood of injuries influenced the severity of injuries. A business leader should match the employee to the job to promote health and safety at the workplace. The work environment factor of organizational health and safety involves the layout, tools, machinery, and work culture (Ofori-Kuragu et al., 2016; Misiurek & Misiurek, 2020). When managers provide a serene work environment and employees get more involved in decision-making processes, they control their work environment (Qi & Wang, 2018).

The safety culture within an organization is critical in enhancing the safety of employees. Schulman (2020) mentioned that adopting a safety culture approach that combines organizational safety programs to reinforce occupational safety and health (OSH) strategies ensures successful workplace safety management. Organizations achieve successful safety culture change management by developing policies, procedures, and various training models to guide workers' behavior and practices

towards occupational safety and health (Schulman, 2020). These safety activities inspire employees to comply with safe work practices and promote workplace safety.

Zhang et al. (2020) cited safety motivation as a factor that drives employees to endorse safety. Safety motivation is an individual's willingness to practice safety to affect behavior (Zhang et al., 2020). A leadership style that stimulates employees' willingness to promote workplace safety supports management efforts in implementing safety enhancement programs. Researchers have demonstrated that transformational leadership is an appropriate style, where leaders engage with followers and create a connection that raises the level of motivation and morality in both the leader and the follower (Kim & Jung, 2019; Shen et al., 2017). This engage-to-connect attribute makes a transformational leadership style an antecedent for inculcating a safety culture within an organization.

Workplace Incidence Prevention and Control

Organizational leaders implement safety improvement measures to address unsafe occurrences. The five hierarchies of safety controls are elimination, substitution, engineering control, administrative control, and use of personal protective equipment (Roelen et al., 2018). Elimination is the most effective and involves physically removing the hazard; substitution focuses on replacing the risk, while engineering control aims at isolating people from the hazards. Administrative controls aid in changing the way people work while personal protection equipment protects the worker from hazards (Roelen et al., 2018). Effective implementation of the safety controls depends on leaders' commitment to incorporating them into business strategies (Kabir et al., 2018). Mabika

(2018) explored the strategies managers and leaders in mining companies use to improve workplace safety and established that managers and leaders could enhance occupational safety and health at the workplace through employee training and developed to equip employees with the relevant skills and knowledge to create a safe workplace environment through task planning and use of standard operating procedures. Mabika noted that organizations adopt a safety-first approach and continuous risk identification and mitigation to improve workplace safety.

Occupational accidents are prevalent in the ASM industry, which primarily results in injury to personnel or fatality due to insufficient safety control measures (Mollo et al., 2019). The potential for economic reparations to organizations due to injury in the ASM industry makes it imperative that managers invest in safety measures to limit the occurrence of occupational incidents (Yang et al., 2019). Yang et al. argued that accidents are preventable and that organizations focusing on achieving an injury-free workplace create and ensure safe work that prevents all accidents. The desire and commitment to deliver an injury-free workplace will require leaders to implement innovation (Yang et al., 2019). The workplace is a dynamic environment where technology and innovations are essential for significant improvements.

ASM managers and leaders should enforce compliance with safety and health rules and regulations to reduce workplace safety incidents. Liller et al. (2018) reiterated the consistent enforcement of health and safety policies and standards to impact the prevention of workplace incidents positively. Consistency in applying and implementing standards remains a crucial concern to the AMS industry (Pickering, 2020). Pickering's

assertion implies that the practical application of safety controls requires managers' and leaders' total commitment.

Project Management Practices

Projects are an essential part of business strategy implementation. Leaders use projects as a vehicle to drive process change and improve productivity to maintain a competitive advantage (Sandhu et al., 2019). Improving the success of project management has thus become a vital subject for many organizational leaders (Demir, 2018). In a competitive business environment, the project manager uses innovative projects to increase efficiency in managing projects (Titarenko et al., 2018). The paradigm of business strategy implementation necessitates project managers to understand the emerging issues within the business landscape to capture all the activities required to achieve project success (Ju et al., 2020). According to Titarenko et al., leaders and managers should make competent decisions by aligning innovation projects with strategic goals and studying the business environment to identify and leverage opportunities to drive innovation. A highly innovative organization improves performance, promotes business growth, and maximizes value in investments (Ju et al., 2020).

Implementing innovation projects in the ASM sector may improve efficiency in the mining process and reduce the wasteful utilization of the mineral resource resulting from low-level technology in the mining processes (Bansah et al., 2018). The ASM leaders and managers should follow standards from the project management discipline to achieve success in implementing the business goal. The focus of business leaders and

managers will be to ensure the projects perform consistently with the organization's objectives (Project Management Institute, 2017). The ASM leaders and managers should develop the competencies to provide the workforce with leadership, planning, and coordination through communications to positively impact organizations' strategy (Sandhu et al., 2019; San Cristóbal et al., 2018).

Ethical leadership in Project Management. Businesses and project-based organizations establish standards and codes of conduct to drive professionalism at the workplace. With an increased focus on professionalization, the public expects the project leaders to behave ethically and professionally in the discharge of their duties to drive productivity (Dalcher, 2018). Dalcher explained that ethical conduct extends beyond the mandatory dictates of the legal system but focuses on values held by different individuals and groups and the ability to reconcile different cultures. Northouse (2019) considered ethical theories in two broad domains: theories about leaders' conduct and theories about leaders' character. Organizations maintain healthy and sustainable economic growth when leaders demonstrate ethical leadership in decision-making (Zhang et al., 2020). Ethical theories that deal with the conduct of leaders look at the consequences of leaders' actions and those that emphasize the duty or rules governing leaders' activity (Northouse, 2019). Researchers assess the effects of leaders' actions based on three decision-making approaches regarding moral conduct where they demonstrate ethical egoism, utilitarianism, or altruism (Northouse, 2019).

The ethical egoism approach focuses on leaders' decision-making that creates the highest good for them or themselves (Drašček et al., 2021). The procedure applies to a

situation where profit maximization is the primary driver of the project leader's

decisions. Utilitarianism focuses on creating the highest good for the greatest number. In

this regard, the morally correct action is the action that maximizes social benefits while

minimizing social costs (Burgess-Jackson, 2013). The difference between egoism and

utilitarianism is that utilitarianism demonstrates impartiality in decision-making (Höll,

2020; Drašček et al., 2021). Altruism is an approach that suggests considering moral

action to have a principal aim of promoting the best interests of others even when it runs

contrary to the organization's self-interests (Laurent et al., 2020).

Northouse (2019) identified five principles of ethical leadership to include

respect, service, justice, honesty, and community. In demonstrating the five principles of

ethics, the project leader shows respect for others, be ready to serve, demonstrates

fairness, honesty, and teamwork among the employees. Listening carefully to followers,

empathizing, and tolerating opposing points of view make the team members feel

inclusive and competent about their work (Burgess-Jackson, 2013). To achieve a

common goal requires that the leader and followers agree on the direction taken by the

group, which the leader can make through a demonstration of high ethical standards.

Leaders in the ASM industry can implement ethical leadership concepts when

executing various projects within the industry. In an industry where workplace accident is

a norm, ethical leadership will drive decisions that will work in the interest of employees.

For example, a decision to support employee wellbeing will see investment in technology

to reduce substandard mining methods to promote responsible mining. Additionally,

showing fairness and just to community members within the operational areas offers a

competitive advantage because the organization would gain community support, thereby improving the industry's social license and creating a sound environment for sustainability.

ASM managers can maximize the value of ethical leadership in many ways, including the continual demonstration of ethical judgment throughout the project life-cycle. Ethical judgment may involve reasoning about a decision to produce an outcome that serves the general good of the organization (Burgess-Jackson, 2013). Additionally, project leaders' development of competency in ethical leadership drives an organizational culture that promotes respect for employees (San Cristóbal et al., 2018). Being creative and continuously innovating has become a critical success factor for organizations (Ju et al., 2020).

Project Management Maturity Models. As many organizations adopt project management to deliver business strategies, excellent project management practice is critical to ensure the successful execution of the business plan. For this reason, improving the success of project management has become an essential subject for many organizational leaders (Demir, 2018). The ASM sector is not exclusive because low-level technology in the mining processes caused wasteful utilization of the mineral resource (Bansah et al., 2018). The academic and industrial communities consider Project Portfolio Management Mature Models (PPMMMs) as reliable tools to improve project management (Demir, 2018). Some PPMMMs that organizations use to assess business performance include Organizational Project Management Maturity Model (OPM3),

Project Program Portfolio Management Maturity Model (P3M3), and Capability Maturity Model (CMM) (Demir, 2018; Hansen et al., 2017).

Qin et al. (2017) indicated that the CMM developed at the beginning of the 90ies, intended initially to measure capability in software development projects, is the precursor of organizations' numerous project maturity models. The maturity model has gained much attention in project-based organizations due to its effectiveness as a tool for assessing, measuring, and comparing an organization's practices against best practices or competitors to map out a structured path to improvement (Fabbro & Tonchia, 2021). The basic premise underlying PPMMM is that the higher the degree of maturity, the higher the chances to successfully complete one's projects (Qin et al., 2017). Researchers have shown that many organizations achieve lower maturity levels (Fabbro & Tonchia, 2021).

Proença and Borbinha (2018) contended that the lowest level of project maturity represents informal or "ad hoc" project management, while higher levels of maturity indicate a stage of full documentation, formalization, and continuous improvement of the project management structures. Crispim et al. (2019) noted that at lower levels of project management maturity, performance improvement suggestions focus on introducing a formal project management system rather than on any particular weakness PPMMM assessment identified. At higher maturity levels, the OPM3 framework influenced performance by either reinforcing efforts in areas of strength and high maturity or by focusing on areas of perceived weakness and low maturity. By implication, OPM3s based on different frameworks will stimulate various suggestions for project management performance improvement (Qin et al., 2017).

The development of the CMM stemmed from the observation that to develop software, organizations must be capable of reliably carrying out several critical software development standard practices consistently and predictably (Qin et al., 2017). Qin et al. used the Capability Maturity Model Integration (CMMI) to support the assessment and improved Research Data Management (RDM) practices, asserting that CMM guides an organization to identify strengths and weaknesses to improve business processes. Fabbro and Tonchia (2021) suggested that organizations use Project Management Maturity Model (PMMM) to improve their business effectiveness and efficiency. Fabbro and Tonchia mentioned a similar PMMMs concept which considers that organizations advance through a series of five stages to maturity levels: level 1 (common language), level 2 (common processes), level 3 (singular methodology), level 4 (benchmarking), level 5 (continuous improvement). The five stages of maturity levels represent an ordinal scale for measuring the maturity of an organization's process and evaluating its process capability.

Nenni et al. (2014) made four remarks about OPM3. First, OPM3 provides a broad-based set of organizational project management best practices that allow a firm to use it as a basis for study and self-examination and consequently to make its own informed decision regarding potential initiatives for changes. Second, OPM3 is industry-independent as it seeks to create a framework within which organizations can re-examine their pursuit of strategic objectives through best practices in OPM3. Third, OPM3 offers reports as a continuum of best practices and as stages of improvement. Fourth, OPM3 does not allow partial fulfillment of any best practices.

Many opportunities exist for ASM owners to increase profits and sustainability, including implementing and maintaining responsible mining. Van Bockstael (2019) indicated that ASM activities caused negative environmental impact and human health issues which has a significant cost impact on the industry. Project maturity would mean that ASM leaders and managers have perfect conditions for managing projects successfully through the development of their capability in the management of project components, including scope, schedule, cost, quality, resources, and risk (Proença & Borbinha, 2018; Project Management Institute, 2017). In a dynamic business landscape where a human resource system is critical for business management, employees' capabilities to executive projects successfully help organizations maintain competitiveness (Chen & Wang, 2018).

Innovations Through Portfolios of Strategically Aligned Projects. The intense competition in the business environment has necessitated SMEs' use of emerging technology and innovation to enhance performance (Ju et al., 2020). Páez-Avilés et al. (2018) explained that innovation is a value that combines content and form, strategy and tactic, and vision and pragmatism to achieve a business objective. Clauss et al. (2021) indicated that strategic sensitivity, leadership unity, and resource fluidity have positive collation value proposition, value creation, and value capture innovations. Innovation improves project success rates by creating a platform for responsive decision-making to maximize the long-term value of the project portfolio, which is critical to achieving the strategic goals of the organization (Titarenko et al., 2018). Small business owners should promote innovations to survive in a competitive business environment, as innovation

helps achieve business goals by driving entrepreneurial performance (Zeb & Ihsan, 2020). The ASM managers may thus rely on emerging technology to drive innovation when implementing responsible mining (Yang et al., 2019).

In managing innovation projects, managers may depend on various approaches to collect and analyze data to determine organizations' future state, and particularly to balance resource allocation. Organizational leaders use different metrics to select viable projects, including return on investment (ROI), probabilistic financial models, option pricing theory, real options analysis, strategic approaches, and scoring models and checklists (Amirkhani et al., 2019; Páez-Avilés et al., 2018). The metric approaches allow the business leaders to keep investment options open and benefit from the upside potential of an opportunity while controlling the downside risk (Jose & Varghese, 2021). For example, in using the real options model in the ASM sector, managers will choose to make an initial investment for purchasing a mineral operating license. Suppose the economic prospects of the project become favorable, in that case, managers may then decide to exercise the option to operate the acquired license or abandon the investment option if economic circumstances are unfavorable (Ibarra-Gutiérrez et al., 2021).

Maintaining the benefits of an innovation project requires good project governance, a project manager's understanding of the emerging business issue, proper application of lessons learned from previous projects, and effective communication to ensure project success (Melo et al., 2020). Melo et al. noted that proper governance systems and project portfolio management best practices ensure accountability in innovation project implementation. According to Catto and Maccari (2021) many years

of research have brought up a variety of new elements that, when applied during a project's life cycle, increase the success of projects. The Stage-gate process and Agile are among the generic tools managers use in managing projects (Cooper, 2014; Ju et al., 2020).

The Stage-gate process consists of a series of stages where managers determine the success of activities carried out during innovation projects. Using the Stage-gate approach, managers can evaluate interim achievements of the project (Cooper, 2014). Organizational leaders execute projects in stages, where each stage is composed of several activities in phases or parallel, and the stages are separated with different decision points, where managers decide on the future of the project with regards to tasks and resource allocation (Stoddard et al., 2019). Though critics consider the as being too linear, too rigid, and not able to handle more innovative or dynamic projects, Cooper argued that such assertion is due to faulty implementation of the assessment tool.

The Agile project management approach is a helpful business improvement tool that emphasizes short development cycles, frequent deliveries, continuous face-to-face communication, and learning during project execution to improve performance (Stoddard et al., 2019). Agile aims to increase the relevance, quality, flexibility, and rapid response to uncertainty within the business process (Nabass & Abdallah, 2019). Ju et al. (2020) established that Agile project management has become increasingly prominent when aligning innovation project portfolios with business strategy to create opportunities for growth and sustainability. According to Nabass and Abdallah, organizations can enhance business performance through Agile management by utilizing internal capabilities to

produce quality products through vigorous internal processes and ensuring regular and continuous process improvement. Stoddard et al. (2019) mentioned integrating Agile project management with the stage-gate approach as an alternative to deal with the challenges of managing projects in highly dynamic business environments.

Transition and Summary

Section 1 provided the foundation of the study, the background of the problem, and problem and purpose statements regarding the ASM mining industry in Ghana. The nature of the study contains a concise explanation for selecting the qualitative case study to explore the strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The study's overarching question was what strategies do ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits. Other topics discussed in Section 1 include the conceptual framework, definition of terms, assumptions, limitations, delimitations, and the significance of the study. I concluded Section 1 with an extensive literature review organized into five main themes: McKinsey 7S framework, SMEs in Ghana, ASM, workplace safety, and project management practices.

Section 2 includes restating the purpose statement and explaining the role of the researcher, participants, research method and design, population and sampling method, ethical research, data gathering, and analysis techniques, and study validity and reliability. Section 3 contains an overview of the study, presentation of the study findings,

application to professional practice, implications for social change, recommendations for action and further study, reflections, and summary and study conclusions.

Section 2: The Project

In this section, I presented a systematic narration on the critical quality indicators for the study. The purpose of this qualitative multiple case study was to explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. Section 2 contains a restatement of the purpose statement and an explanation of the research method and design. Other topics discussed in Section 2 include the role of the researcher, participants, population and sampling, ethical research, data collection instruments and techniques, data organization techniques, and data analysis for the study. Finally, I discussed the approaches for establishing reliability and validity to ensure the accuracy and credibility of the study findings.

Purpose Statement

The purpose of this qualitative multiple case study was to explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The target population was five experienced ASM managers from five ASM companies located in Ghana, West Africa, who have successfully implemented and maintained responsible mining to maintain or grow revenues and profits. The implications of positive social change included the potential to improve business performance and profitability, provide employment opportunities, and promote income generation to community members. By implementing and maintaining responsible mining, ASM managers and leaders could improve workplace safety and

enhance employees' health, promoting a culture of safety through knowledge sharing and improving the quality of families' lives within the mining communities.

Role of the Researcher

The role of the researcher in qualitative research includes the collection of primary data using different data collection techniques, analysis, and validation of the reliability of the study (McKinlay et al., 2017; Yin, 2018). The researcher selects the research method appropriate for the study and identifies suitable participants. Lancaster (2017) stated that qualitative researchers engage study participants to establish rapport, conduct interviews, and determine the data analysis approach. In collecting data for the study, my responsibilities included selecting the research method and design to meet the research objective, selecting participants, setting the study boundary, and collecting and establishing themes within the data. In this study, I gathered data by conducting semistructured interviews and document reviews to explore the strategies ASM managers use for successfully implementing and maintaining responsible mining while also maintaining or growing revenues and profits.

My relationship with the research topic came from working for over 20 years in the mining industry in Ghana. As a geology manager in a reputable mining company, my responsibilities included business strategy formulation, resource management, performance evaluations, budgeting, coaching and mentoring, and risk management. My industry experience and literature reviews have given me a broad perspective on the subject. Hence, the interest in exploring strategies ASM managers use to implement and maintain responsible mining within the ASM space to enhance operational efficiency and

maximize profitability to achieve a sustainable mining industry. My interest in strategic management practices led to identifying the McKinsey 7S framework, which considers that effective organizational change results from the relationship between seven internal elements within an organization. The internal elements are: (a) systems, (b) strategy, (c) structure, (d) style, (e) staff, (f) skills, and (g) shared values (Dyer et al., 2016). I mitigated my judgmental and biased tendencies throughout the study by ensuring that my experience in the subject did not influence the study interpretations but depended on participants' knowledge. Furthermore, I ensured that I had no previous professional relationship with the study participants.

Researchers must consider ethics as vital and address related issues before embarking on the research process, from inception through dissemination and or sharing the results, to avoid possible ethical concerns arising during the research process (Al Tajir, 2018). The researcher must demonstrate special care and sensitivity when conducting the study to prevent violation of participants' rights. Belmont Report provides moral guidance to researchers (Wessels & Visagie, 2017). According to Wessels and Visagie (2017), the Belmont report identifies three ethical values governing research involving human subjects: respect for persons, beneficence, and justice. I followed the Belmont Report's principle in this study, including upholding respect for participants, beneficence, justice, and maintaining confidentiality. Research and ethics require collaboration between experts, decision-makers, practitioners, and communities to facilitate coordinated response (Aung et al., 2019). I provided participants with informed consent forms outlining the purpose and nature of the study, how to maintain their

confidentiality, my duties as the researcher, and their roles as research participants before commencing the interview sessions.

The researcher must establish and maintain a relationship with participants to simulate an open and honest exchange of information, which would help reduce some research biases associated with qualitative research. Any action that encourages a false response from participants or may influence the original record and interpretation of participants' response becomes a threat to the research reliability (Cypress, 2017). I avoided any form of personal beliefs and preferences in the data collection process by conducting data validation through data source triangulation and crosschecking. Researchers should use approaches that prevent them from viewing the data through a personal lens to mitigate bias during the data collection process (Fusch et al., 2018).

Interviews are a critical aspect of qualitative research. Interview protocol is a vital tool the researchers use to ensure consistency of interviews with study participants and obtain the information needed to achieve the study objective. Dempsey et al. (2016) indicated that qualitative researchers use interview protocols to collect consistent data to avoid the loss of critical information. The interview protocol ensures a good outcome for both the researcher and the participants. I used an interview protocol (see Appendix A) that corresponds with the interview questions (see Appendix B) as a guide to ensure I followed the same order in asking participants the questions to prevent prejudices during the interview. The interview protocol involved a self-introduction, the use of open-ended and probing questions, a consent form review, and an audio recording device.

Participants

The research participants in qualitative research must understand the study topic and help answer the research question (Yin, 2018). The participant with sufficient experience in the study phenomenon would contribute to collecting reliable data and illuminate the topic of study. To explore the strategies ASM managers use to implement and maintain responsible mining while maintaining or growing revenues and profits, it was vital to choose individuals who had successfully managed ASM projects. I used purposive sampling to select participants from the ASM companies in Ghana, West Africa. The eligibility criteria for the research participants included: (a) individuals who are managers of the ASM industry in Ghana, (b) individuals who have successfully implemented and maintained responsible mining in the ASM project, and (c) persons that showed a willingness to participate in an interview.

Gaining access to the appropriate participants was critical for successful research. I sent an approval letter (see Appendix C) from the Walden University Institutional Review Board (IRB) to the research participants. Also, I included a letter of invitation (see Appendix D) to the participants. The request included the informed consent form, interview protocol (see Appendix A), and an explanation of the research. Researchers provide information to study participants to gain their trust and approval and help them decide about participating in the study (Yin, 2018).

Qualitative researchers establish a positive working relationship with interview participants to ensure a successful study (FitzPatrick, 2019). After obtaining the participants' approval, I used phone calls, e-mails, and an in-person visit to communicate

and establish a working relationship. FitzPatrick indicated that effective communication helped a researcher gain participants' trust to achieve quality data. I assured the participant of total protection of confidential information and the right to redraw from participation.

The participants' experience aligned with the research question, and I included only ASM managers with relevant experience in the implementation of responsible mining. The participants' knowledge in the study area increased the chances of attaining data saturation because the participant gave enough information to replicate the study to positively impact the research validity (Cunningham et al., 2017; Cypress, 2017).

Research Method and Design

The qualitative method was the most appropriate approach for the study because it explored the strategies that some ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The multiple case study design is an exploration strategy in which the researcher examines a specific and challenging phenomenon within its real-life methods. A multiple case study design was the most suitable research design for the study. For this qualitative study, I used a multiple case study design. In this section, I discussed the chosen research method and the research design for this study, the rationale for selecting a qualitative multiple case study approach, and how to ensure data saturation.

Method

Quantitative, qualitative, and mixed methods are the three research methods (Leppink, 2017). A qualitative inquest is an effective way to explore individuals'

experiences, meaning, and interpretations (Bengtsson, 2016). The qualitative method was the most appropriate to answer the research question in this study because the purpose of this study was to explore responsible mining implementation strategies by collecting data through in-depth interviews. Harry and Fenton (2016) indicated that researchers use the qualitative method to examine the participants' experiences within a socialistic setting. I used the qualitative approach to gather information from participants' experiences of the phenomenon. A qualitative method was the most appropriate for this research because I explored the phenomenon to obtain personal understandings of ASM managers in implementing responsible mining.

Researchers use a quantitative method to investigate the relationship between variables using a statistical approach to measure and analyze numerical data (Ren et al., 2019). The quantitative research method is appropriate for a research question that seeks to determine the causal relationship between variables within the studied phenomenon. This study did not focus on examining relationships among variables by testing hypotheses because the research question did not require the validation of relationships among variables. Therefore, the quantitative method was not appropriate for this study.

Mixed method research combines qualitative and quantitative methods (Turner et al., 2017). Mixed methods research was not appropriate for this study. The study did not involve using statistical data to explore the experiences and perspectives of ASM managers in implementing responsible mining. Also, the purpose of the study did not include a quantitative component to warrant the use of the quantitative method.

Research Design

I used a multiple case study design for the study. Using a multiple case study design supports a researcher's exploration of a particular phenomenon and allows for more compelling evidence (Yin, 2018). Many research designs are available to the researcher, including case study, ethnographic, and phenomenological (Fusch et al., 2018). Martens and Carvalho (2016) explained a case study design as an exploration strategy in which the researcher examines a specific and challenging phenomenon within its natural life. The multiple case study design was appropriate for my research because it would provide evidence from more than a single ASM operation about how managers implement and maintain responsible mining to give more convincing evidence. Although a single-case design could lead to a successful study, it could limit the researcher to gather evidence from one ASM operation.

An ethnographic design is also used for multiple perspectives but involves an extended exploration of cultural or social groups (Fusch et al., 2018), which was not the focus of this study. In phenomenological design, researchers collect data principally through interviews to understand the participant's lived experiences and perception of the phenomenon (Harry & Fenton, 2016). The purpose of the study was to describe the actual experiences of managers in the ASM industry and not the personal meanings of experiencing the studied phenomenon of the ASM project. Thus, the phenomenological design was inappropriate for the study.

Data saturation occurs during the data collection process when the researcher deems and can establish that no new emerging themes arise when interviewing successive

research participants (Vasileiou et al., 2018). On reaching data saturation, there is a satisfaction that the researcher has collected enough information about the phenomenon to replicate the study. Thus, data saturation enhances research quality to ensure content validity. Researchers use multiple data sources to reach data saturation (Fusch et al., 2018). I used data triangulation by collecting the research data from various sources to reach data saturation.

Population and Sampling

In research, it is difficult to gather data from all individuals in an entire population of a study area; hence, the need to sample a convenient number of individuals or subgroups within the scope of the study. Link (2018) explained that population sampling is the process of selecting a subsection as a representative of a population of interest. The population sample for this doctoral study involved five managers from five ASM companies in Ghana who have successfully implemented and maintained responsible mining while maintaining or growing revenues and profits. I used purposeful sampling to identify and select five ASM managers who were the study participants.

A purposive sampling technique involved selecting participants who most likely could provide the necessary data for a meaningful understanding of the study phenomenon (Yin, 2018). Kandemiri and Nkomo (2019) reiterated that researchers use a purposive technique to select specific participants based on their in-depth knowledge about the study topic. I involved participants with detailed information and understanding about the implementation and maintenance of responsible mining in the ASM industry, hence my justification for using the purposeful technique. A critical component of the

participant selection was the readiness to participate and the capability to communicate experiences and thoughts of the phenomenon under study. As a qualitative researcher, I was concerned with establishing meaning into the study phenomenon but not using assumptions. Cornelissen (2017) argued that the hallmark of qualitative research is under pressure because most qualitative researchers adopt quantitative styles of theorizing, which have typically been the preserve of quantitative methods. My goal was to produce vibrant and detailed explanatory accounts of phenomena under study.

The sample size for a qualitative study should be large enough to obtain enough data to sufficiently describe the phenomenon of interest and address the research questions (Sim et al., 2018). However, a large sample size creates the condition for having redundant data (Saunders et al., 2018). Dworkin (2012) proposed 1 to 25 participants as an appropriate sample size for qualitative research. Sampling size for qualitative research is smaller than quantitative research methods because the focus of the qualitative researcher is on gathering an in-depth understanding of the phenomenon rather than the generalizability of the research findings (Boddy, 2016; Dworkin, 2012). Yin (2018) stated that qualitative researchers could use a sample size of between five and 50 participants. The sample size of 5 participants for my study met the qualitative study requirement. The responses from the sample size provided sufficient data to answer the research question that explored strategies ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits.

Saunders et al. (2018) argued that qualitative researchers must reach data saturation to justify using a particular sample size. Data saturation denotes a point in the

research process when the researcher has collected enough data and requires no new information in data analysis, indicating the end of research data gathering (Vasileiou et al., 2018). Thus, qualitative researchers achieve data saturation when extra data collected does not result in new themes, perspectives, and insight into the study phenomenon for further analysis and coding. The participant's knowledge and experience in the study area increased the probabilities of attaining data saturation because the participant gave enough information to replicate the study to impact the research validity positively. Using five ASM managers from different mining companies as research participants, I collected rich data regarding their varied experiences and strategies for successfully implementing responsible mining and gained an in-depth understanding of the study phenomenon.

An interview setting is vital in a qualitative study to assure the participants the needed privacy without interruptions (Doll, 2018). I asked the participants to choose a convenient venue, time, and date to conduct the interview. Researchers could use private offices for the interview process because such locations could minimize distractions and protect participants' privacy (Park & Park, 2016). I agreed with the participants to use their private offices for the interview to limit external disruptions and protect their privacy. I used open-ended questions and a semistructured interview technique during my meetings with the participants at the participants' private offices, which was the interview location.

Ethical Research

Specific ethical concerns arise for all research involving human subjects. Therefore, the researcher must indicate how to address ethical issues related to the study

involving human participants. Research participants' protection is critical in achieving

ethical research (Roets, 2017). Al Tajir (2018) argued that ethical issues are essential in

qualitative research and admonished researchers to address such matters before engaging

in the research process to avoid any possible ethical concerns that could arise during the

research process. Yin (2018) advised researchers to maintain excellent professional

competencies during the research process to ensure that participants' rights are protected.

Developing an ethical guideline protects the participants and safeguard their privacy and

confidentiality to protect the sanctity of the research (Al Tajir, 2018). To better

understand the ethical issues affecting participants when conducting research and

compliance with Walden University requirements, I completed the Collaborative

Institutional Training Initiative (CITI) web-based training (see Appendix F).

Qualitative researchers should adhere to the three fundamental principles

recommended in the Belmont Report in dealing with the research participants (Wessels &

Visagie, 2017). I followed the three fundamental principles recommended in the Belmont

Report: respect for persons, beneficence, and justice in dealing with the research

participants. To demonstrate respect for ethical values regarding human research

participants, I initiated data collection for the study after the Walden University IRB had

approved the research proposal and issued my IRB approval number (10-19-21-

0755455). Because adherence to ethical standards is mandatory in research, I strictly

followed the protocol that respected the participants' rights. Some of the ethical practices

included the protection of confidentiality, the right to withdraw from the study at any

time, and using the interview protocol to avoid any misunderstanding during the data collection process.

Informed consent is an essential aspect of a study because it allows participants to access important information regarding their roles (Al Tajir, 2018). According to Al Tajir, showing respect to participants involved in research means appreciating their independence. A researcher should give participants the freedom to decide whether or not to participate in the study. I sent informed consent forms and letters of introduction (see Appendix D) to the selected participants. The informed consent form included information about the research topic, research purpose, research procedures, consent to participate, research risk and benefits, voluntary nature of participation in the research, and confidentiality protection procedures for participants. I accepted the involvement of the participant in the study after receiving their signed informed consent form. I used codes to identify both the participants and the mining companies to ensue confidentiality.

To protect the confidentiality of the participants, I informed the participants that I would store all data in a safe, locked location for 5 years. I restricted the access to the study information to me only to mitigate any incidence of unlawful entry, loss of participants' details, and disclosure of classified information to third parties. After 5 years, I would destroy the data by erasing all electronic records and physically destroying any removable hard disks and papers used in storing the study data.

Data Collection

Instruments

Data collection instruments are tools researchers use for data collection. Data

collection processes in qualitative research include (a) focus groups, (b) informal

interviews, (c) semistructured interviews, (d) documentation, and (d) observation

(Chatzitheochari et al., 2018). In a qualitative case study, the researcher is the primary

data collection instrument and must demonstrate vital emotional intelligence and soft

human relations skills to build the trust of the research participants (Bush et al., 2020). In

this study, I was the primary data collection instrument and ensured that the processes I

chose for the study were valid and reliable. Yin (2018) argued that the validity and

reliability of research depended on selecting appropriate data collection instruments. I

used member checking to achieve the reliability and validity of research data. According

to Caretta and Pérez (2019), through member checking, the researcher engaged with

participants to ensure the data collected is devoid of any biases that may compromise the

credibility of the study.

I employed a face-to-face interview in gathering the research data. Researchers

maintained that the face-to-face method is a valuable information gathering tool in

qualitative case study research (Dauphinot et al., 2020; Kazawa et al., 2020). In a face-to-

face interview, the researcher could obtain additional information such as those expressed

in body language and facial expressions that the researcher would not have accessed

(Oltmann, 2016). Researchers use either a written or audio form during a face-to-face

interview to collect detailed information. I used an audio recording device to capture the

data and supplemented it with written notes. During the interview process, qualitative researchers use open-ended semistructured questions designed according to the interview protocol to access rich information from participants (Elsawah et al., 2015). During the interview process, I used the interview protocol (see Appendix A) and open-ended semistructured interview questions (see Appendix B) to collect rich information from the study participants. Yin (2018) mentioned that semistructured interviews help to direct the interview, provide flexibility for participants, and the insights reflecting participants' dependent perspectives. Using a semistructured interview gave me an in-depth understanding of participants' responses to the research questions.

To improve the validity and reliability of the data collection instrument, I conducted a member checking to verify that the data collected was credible, accurate, transferable, and valid. Member checking allows the participant to verify the research data's accuracy to validate the researcher's interpretation (Naidu & Prose, 2018). Researchers employ member checking as part of the data collection process by returning to the participants with a specific questioning style to ensure the accuracy of the interpretation (Naidu & Prose, 2018). After concluding the interviews, I summarized the entire interview and recordings and shared the themes to participants to member check for credibility, accuracy, transferability, validity, and acknowledge the truthfulness of the information. Where participants identified inaccuracies, they provided extra information during member checking.

Data Collection Technique

A critical component in a qualitative study is the quality of the data collected, which is contingent on the researcher's data collection style. The data collection approach involves gathering information methodically that helps the researcher answer the research question (Heng, 2020). Various data collection techniques are available for use, including interviews, focus group discussion, video recording, and observation (McKinlay et al., 2017). This study's primary data collection technique was semistructured interviews using a face-to-face meeting and the interview protocol (Appendix A) to guide the interview to remain consistent across all research participants. I used a digital voice recorder and a cell phone for audio recording, and a pen and paper to make notes during the interview. The digital voice recorder had MP3 capabilities to transfer to a disc for secure storage quickly.

Many researchers consider interviews a critical data collection technique (Guest et al., 2017). Qualitative researchers use semistructured interviews and open-ended questions, which allow the researcher to probe participants' responses to obtain additional evidence about the research question (Guest et al., 2017). Kazawa et al. (2020) argued that though interviews are an effective data collection technique, the cost incurred and the time the researcher used to reach out to the participants make the method expensive. Advantages for collecting data using interviews include: (a) The opportunity for the interviewer to seek clarity through the use of probing questions, (b) the flexibility of the interviewer to engage the various participants differently during the interview as the situation may demand, and (c) the flexibility of the participants to explain issues based on

their level of experience (Heng, 2020). A potential disadvantage of a semistructured

interview includes the possibility of gathering less information and possible bias during

the interviewing process (Young et al., 2018). The data from the five experienced ASM

managers provided reliable information relevant to the research question, which explored

strategies ASM managers use to implement and maintain responsible mining while also

maintaining or increasing revenues and profits.

There was no pilot study for this study. A pilot study helps the researcher improve

data collection plans regarding the procedures to follow and help determine the readiness

of other research logistics (Yin, 2018). The interview protocol (see Appendix A) defined

the data collection process and provided the needed guidance to obtain detailed

information to answer the research question. By member checking interviews at a

specific date and time, I followed up with study participants on the primary interviews to

correct their earlier responses to the interview questions. Through member checking, the

participant can validate the researcher's interpretation and expound upon the research

data's accuracy and credibility to improve the reliability and validity of the data (Naidu &

Prose, 2018). Using member checking, I minimized any prejudice to properly reflect on

the ASM managers' personal experiences for implementing responsible mining while

also maintaining or growing revenues and profits.

Data Organization Techniques

Qualitative researchers must establish a process to keep track of the research data

(Niu et al., 2018). The proper management of research data is critical to the success of the

data analysis (Qin et al., 2017). To manage the data collected during the semistructured

interviews, I created a reflective journal during the data gathering. I used a digital voice recorder and a cell phone as a secondary audio recording device. Sahin et al. (2019) indicated that researchers use reflective journals to record and reflect on personal experiences in a research process to help them put down their insightful thoughts about the proceedings in the research process. The reflective journals allowed me to reflect on my observations and conduct during the various phases of the research. I organized the research data using Microsoft Word to develop and maintain a password-protected database for all the research information.

To ensure privacy, I followed Walden University's IRB requirements for protecting participants' rights and identify when collecting information for the research. Codes were used to identify both the participants and the mining companies to ensue confidentiality. I safeguarded all the raw data collected by storing them in a safe box. I deleted the audio recording on the cell phone after confirming the data on the primary recording device and destroyed the primary audio tapes immediately after transcription. Researchers destroy qualitative data to prevent using the information in new research (DuBois et al., 2018). Five years after the Chief Academic Officer's approval, I would remove and destroy all field notes, files, and softcopy information using a paper shredder and KillDisk software.

Data Analysis Technique

Data analysis involves carefully evaluating research data to find codes and themes to develop categories and give meaning to the study phenomenon after data gathering (Assarroudi et al., 2018). Qualitative researchers' failure to demonstrate rigor in the data

analysis may undermine the research integrity (Nowell et al., 2017). Researchers gather data from multiple sources and use analytical procedures to arrive at a meaningful conclusion to make the study reliable (Yin, 2018). Researchers use to compare the various data sources before drawing inferences to enhance the reliability of the study results (Fusch et al., 2018; Yin, 2018). Yin (2018) discussed four triangulation methods; (a) investigator triangulation, (b) data triangulation, (c) theoretical triangulation, and (d) methodological triangulation. I used methodological triangulation to improve the study's validity to increase confidence in the study outcome. Using methodological triangulation in the data analysis process ensures the study's credibility and offers an in-depth understanding of the phenomenon (Yin, 2018; Joslin & Müller, 2016).

A critical aspect of data analysis is using a systematic approach (Cox et al., 2019). Thematic analysis is a systematic approach researchers use to arrange data into categories and patterns and identify themes to produce reliable study outcomes (Nowell et al., 2017). Yin (2018) mentioned the process of data analysis to include segmentation, categorization, and rearrangement to identify existing relations and draw inferences between and within the data. I followed the data analysis process to ensure the analysis of data for the study met the rigor required in qualitative research. After the interview, I evaluated the research data to develop patterns and key themes to address the research topic. I used the NVivo software package to develop code, identify patterns, and organize themes into appropriate categories. The NVivo program has been a valuable tool to organize and discover insight into qualitative research data (Denizci et al., 2019).

The data analysis to explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits began by compiling data from different sources. The data sources include the McKinsey 7S conceptual framework, semistructured interviews, and company public documents. The company public documents examined include published annual reports. I reviewed current references to the McKinsey 7S framework to select and compile themes identified in the data organization connected to the research topic. After reviewing and comparing the codes, I interpreted and categorized the codes into themes and correlated the critical themes with the literature, including new studies published since the research proposal and the conceptual framework. Finally, I concluded the data analysis by connecting the interpretation of the findings with the McKinsey 7S framework and the research question.

Reliability and Validity

Reliability and validity are vital in a qualitative investigation because they assure that research conclusions and actions are devoid of any possible bias and thus render the study credible and trustworthy (Assarroudi et al., 2018). To establish trustworthiness in a qualitative study, researchers use the criteria of credibility, transferability, dependability, and confirmability (Nowell et al., 2017). Validity in qualitative research assesses the veracity of the research methods and how the findings reflect the research data. In contrast, reliability demonstrates consistency within the research process to ensure that the findings of a study can be replicated (Cypress, 2017).

Reliability

Reliability shows consistency in the study and the dependability of the findings (Rashid et al., 2019). Dependability is similar to the reliability concept in a qualitative study. Researchers describe dependability as the consistency of collected data (Fajartriyani et al., 2019). Nowell et al. (2017) asserted that researchers establish dependability when the data collection process is logical, traceable, and documented. Researchers must evaluate the reliability of the research findings to maintain the truthfulness and accuracy of the conclusions. I used the member checking of data interpretation and interview protocol to ensure the dependability of the research findings. Researchers using the member checking technique go back to the research participants with an interpretation of the responses to ensure the accuracy of the meaning to mitigate bias (Fusch, 2018). I reached out to the participants to read through the interview summary to ensure the accuracy and trustworthiness of the written records.

Validity

Validity in qualitative inquiries concerns the accuracy and truthfulness of research findings to make the study credible (Cypress, 2017). Credibility denotes self-assurance and acceptance of the research results. Researchers asserted that the accuracy of qualitative research connects to the validity concepts (Cypress, 2017). A valid study should demonstrate the application of operationalized parameters to determine what the study seeks to measure using a suitable process, data, and tools in the data analysis of the research question (Thomas et al., 2018).

Credibility. To ensure the credibility of this study, I applied multiple sources of data

collection, including interviews and review of company documents and member checking

of data interpretation. Researchers conducting a qualitative study use data triangulation to

improve the credibility of the study (Yin, 2018). Data source triangulation focuses on

obtaining data from multiple sources within a single data collection method to allow for a

complete perspective of the phenomenon. Thus, multiple data sources corroborated the

findings to make the study credible. The research participants involved five ASM

managers who have successfully implemented responsible mining. Researchers obtain

multiple pieces of evidence from the participants to strengthen the construct validity by

providing multiple perspectives of the study phenomenon (Moon, 2019). Member

checking allowed participants to read through the interview summary to ensure the

accuracy and credibility of the interview data (Iivari, 2018).

Transferability. Transferability refers to how the research findings can be applied in

different circumstances or situations (FitzPatrick, 2019). In qualitative research,

transferability is analogous to generalizability and similar to external validity

(FitzPatrick, 2019). Researchers meet the transferability test by providing a detailed

explanation of the research processes. The study results and the availability of

information regarding the research process will help readers evaluate the transferability

of study findings and conclusions. The findings of this study could inform prospective

ASM managers and leaders of the implementations and maintenance of responsible

mining or provide scholars with the basis for further research. To establish the

transferability of this study, I collected data using the purposive sampling method,

provided a detailed verbatim description of the participants' responses, and triangulation of multiple data sources.

Confirmability. Confirmability refers to the degree of research's objectiveness and accuracy compared to the researcher's biases (Fusch et al., 2018). Yin (2018) considered confirmability as the extent to which the result of a study endorsed another study of similar character. Researchers use confirmability to address the trustworthiness of qualitative research; to measure the level of confidence of study findings based on participants' perspective of the phenomenon rather than potential researcher biases (Nowell et al., 2017). Qualitative researchers enhance confirmability through triangulation and member checking (Iivari, 2018). I used data triangulation and member checking interviews to strengthen the confirmability and validity of this study. Interviewing the participants allows for heterogeneous data sources and provides more comprehensive data to ensure uniformity (Yin, 2018). I compared participants' responses to establish consistency to improve the accuracy of the study results.

Data Saturation. Data saturation is a point in data analysis when the research data provides no new additional information to the result to warrant further coding (Hennink et al., 2017). Thus, any new data collected becomes superfluous of data already collected (Saunders et al., 2018). Achieving data saturation is essential in qualitative inquiries because data saturation increases the validity and reliability of the results (Fusch et al., 2018). I interviewed five participants to attain data saturation by collecting detailed and comprehensive information from their perspectives until the responses no longer provided new information.

Transition and Summary

The purpose of this qualitative multiple case study was to explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. In Section 2, I restated the purpose of the study and discussed the roles of the researcher, the research method and design, and the participants of the study. I further provided detailed information about population and sampling, ethical research, data collection instrument, technique, and data organization. I also discussed how to mitigate researcher bias and regulate the interview steps by using appropriate protocols, including using eligibility criteria to choose suitable participants who have the competency to answer the research question. I explained why I chose a qualitative case study as my research method and design and discussed the ethical concerns for a research study. I finally discussed the data analysis process and the reliability and validity of the study. Section 3 contains an overview of study and presentation of findings, applications to professional practice, implications for social change, recommendations for action and future research, reflections, and summary and study conclusions.

Section 3: Application to Professional Practice and Implications for Change

This section contains an overview of the study and a presentation of the strategies some ASM managers use to implement and maintain responsible mining while maintaining or growing revenues and profits in Ghana. The research participants provided the illustrations I used to link the study findings with the conceptual frameworks regarding the Mckinsey 7S framework. Other topics discussed in this section include the applications to professional practice, implications for social change, recommendations for action and future research, reflections, and summary and study conclusions.

Overview of Study

This qualitative multiple case study aimed to explore the strategies some ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The conceptual framework was the Mckinsey 7S framework. The overarching question was, what strategies do ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits? Five ASM managers from five organizations in Ghana who have successfully implemented and maintained responsible mining while also maintaining or growing revenues and profits participated in this study. The participants provided me with the primary data to answer the overarching research question and company public documents as secondary data source.

I continued the data collection process until no additional information emerged from the document review and interview process to achieve data saturation. Based on the

participants' responses to the interview questions, I identified four themes: (a) corporate social responsibility and stakeholder engagement, (b) human resources management and communication, (c) optimizing mining technique, and (d) regulatory and portfolio management. By relating the Mckinsey 7S framework to the study findings, I developed a better understanding of the strategies some ASM managers use to implement and maintain responsible mining while maintaining or growing revenues and profits in Ghana. The study findings indicate that some ASM managers use a blend of strategies to ensure effective implementation and maintenance of responsible mining while maintaining or growing revenues and profits.

Presentation of the Findings

The overarching question was: What strategies do ASM managers use to implement and maintain responsible mining while also maintaining or increasing revenues and profits? The activities of ASM have gained prominence in Africa with substantial economic opportunities (Owusu et al., 2019). The lack of management strategy results in wasteful exploitation of the mineral resource, with adverse environmental and social impacts (Bansah et al., 2018). Managers and leaders in the ASM industry should develop strategies for implementing and maintaining responsible mining through the effective management of the industry's internal resources to improve the mining processes for revenue growth (Pokorny et al., 2019). I used methodological triangulation to combine the data collected from interviews and company public documents such as published annual reports. Upon completion of the interview with the fifth participant, no new information or themes emerged, indicating that I had reached

data saturation. Using NVivo 11 application, I organized the study data and conducted the thematic analysis.

According to Ofosu et al. (2020), the mining processes of many ASM companies involve the use of low technology but high labor-intensive for prospecting, extraction, and processing of the gold. Bansah et al. (2018) noted that investors in ASM lose about 70% of gold due to lack of technological involvement and inadequate skills. Inadequate supervision by regulatory agencies promotes low-level technology in the ASM sector (Kinyondo & Huggins, 2020). The four themes I identified in this study are: (a) corporate social responsibility and stakeholder engagement, (b) human resources management and communication, (c) optimizing mining techniques, and (d) regulatory and portfolio management. In the following subsections, I will present the four themes that emerged from the thematic analysis of the participant's responses to the interview questions and review of the company's public documents.

Theme 1: Corporate Social Responsibility and Stakeholder Engagement

Business leaders who can strategically engage all stakeholders in the organization's business activities may attain an affective commitment from employees and other stakeholders (Azim et al., 2019). The first theme to emerge was corporate social responsibility (CSR) and stakeholder engagement, highlighting the importance of engaging key stakeholders and executing CSR to implement and maintain responsible mining while maintaining or growing revenues and profits. CSR and stakeholder engagement emerged from Interview Questions 1-3 and 5-8. All participants affirmed

using CSR and stakeholder engagement as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Responding to Interview Question 1, participant P3 said, "Our strategy is based on CSR, which is a strategy we intentionally adopt as a management strategy." According to participant P3,

> We formed an association comprising all the communities within the mining area where they presented their various needs. Also, we employed a sub-chief who liaised well with the chiefs and the assemblymen, so we won the hearts of the people.

In response to Interview Question 2, participant P3 stated:

> On CSR, we have some things we use to measure the effectiveness - we visit the community to engage them on all projects the organization has embarked on to support the community. We get community support because of the engagement.

According to participant P5, "We work within a community and have a cordial relationship with the farmers. Our success is measured by considering how supportive the community has been with us in executing our work." Explaining further, participant P5 attested, "We measure success through our engagement with our stakeholders. So far, I can say we get about 90-95% success working with our community." Responding to Interview Question 3; participant P5 asserted, "The attitude towards the employees and the local community. Having interpersonal relationships and the skills to manage both employees and external stakeholders that you daily meet and interact with is very important."

In response to Interview Question 5, P1 explained, "The related benefit of responsible mining into our activities is that we meet the community requirements. We address community issues - we have established CSR fund … helping us to meet some community needs and sustain our operation." Responding to Interview Question 5, participant P2 noted, "Responsible mining has made the communities in which we work to have confidence in our operation. Also, we have created a positive image for the company – everybody wants to know what it is that you are doing right." In response to Interview Question 5, P3 opined, "The number one benefit is the goodwill the organization has within the country. Anytime you are looking for the best practices for small-scale mining organizations, our name comes up because of the responsible mining implementation." According to participant P4, "So, at the end of the day, if you do responsible mining, you improve community support through the use of CSR funds." Furthermore, participant P5 affirmed, "We work within about seven communities, and we have set up a fund under CSR to support the community to meet some of their social needs. We have what accrues for the community through the CSR fund."

Responding to Interview Question 6, participant P1 said, "We have not experienced many difficulties because, through consultations, we are always proactive." In response to Interview Question 6, participant P2 stated, "We have set up a CSR fund as part of our strategy to support the community." Participant P3 confirmed, "The community also thought the organization was giving out their land to third parties, so there was community agitation. We use community engagement to address such challenges." Responding to Interview Question 6, participant P5 advised, "The main

challenge has been the community acceptance when you are entering new areas to work, but you need to solve their problems through the community relations outfit."

Responding to Interview Question 7, participant P1 said, "And then within the community, we always on taboo days or festivals visit the chief during such celebrations." In response to Interview Question 7, P2 stated, "For a community, like this I said, we have formed the CSR fund, where they meet regularly. The association member will communicate company strategy to them. So, everything on CSR we indicated in it." Responding to Interview Question 7, participant P4 asserted, "We communicate strategy to the external stakeholders through our community engagement section, including the CSR programs. We have the best of relationships due to the CSR policy." In response to Interview Question 7, P5 affirmed, "We also engage external stakeholders like the regulatory agencies and the community leaders about our strategies through the community relations professionals."

In response to Interview Question 8, P4 explained, "We do not have an issue with the community; we do concurrent reclamation of mined-out areas so people can do farming. This has helped us maintain cordial relationships with the community." Responding to Interview Question 8, participant P5 noted, "Also, the relationship with the community is very good, so we are on course to achieve our target in the hard rock exploration space." The study findings align with Azim et al.'s (2019) statement, which indicated that ASM managers used CSR and stakeholder engagement to implement and maintain responsible mining while maintaining or growing revenues and profits in Ghana. As applied in this study, 100% of the participants acknowledged using CSR and

stakeholder engagement as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits. The participants acknowledged using various strategies to overcome the implementation barriers regarding implementation and maintenance of responsible mining while also maintaining or growing revenues and profits..

Theme 2: Human Resources Management and Communication

Many business leaders have shown interest in employee safety at the workplace due to the profound economic impact a safe workplace has on business (Kim & Jung, 2019). Singh and Misra (2020) noted that managing employee safety in the workplace is a critical obligation because organizations that value workplace safety improve productivity. Lappalainen et al. (2020) stated that the transformational leadership styles of organizations' leaders directly impact workers' safety attitudes and awareness and reinforce their behavioral safety. Human resource management and communication emerged from Interview Questions 4-8. All participants recognized the importance of effective human resource management and communication to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Hald (2018) established that employees are motivated in a safe work environment and involved with their organizations emotionally, which substantially improves performance. Wiengarten and Longoni (2018) argued that poor workplace safety practices cause economic and productivity losses due to employees' compensation payments, medical expenses, and costs for legal services. Responding to Interview Question 4, the participants stated:

- "Human resources and leadership also play an important role in delivering our strategy. We take care of all the workers' needs. We have a unionized workforce. Human resources play a key role in any organization. For example, today I any sponsoring a worker to attend a Microsoft office course to help automate our system, to improve efficiency - like in the area of resource estimation." (P1)

- "Provide health screening or thorough medical check-up for employees to ensure you get fit people to do your work. When you have healthy workers, it will make your work efficient and productive." (P2)

- "Skillful human resource in all the departments - geology, mining, metallurgy, safety, environment, and security. We also have standard operating procedures we use for all the service providers to follow with good supervision from our professionals." (P3)

- "Firstly, we do proper supervision. When you do not do proper supervision people work inefficiently which leads to poor recovery and losses." (P4)

- "Honesty, hardworking, punctuality, and having the passion for the job you do. You take the project as your own to make the project successful. Show commitment to the task." (P5)

The leadership factor of organizational health and safety involves the skills, style, and experience of the leader in confronting the safety issues in the work environment (Kim et al., 2020; Lappalainen et al., 2020; Mollo et al., 2019). According to Mrugalska et al. (2016), workers' participation in occupational safety and health planning generally

produces more significant outcomes. When managers provide a serene work environment and employees get more involved in decision-making processes, they control their work environment (Qi & Wang, 2018). In response to Interview Question 5, participant P4 said, "So, at the end of the day, if you do responsible mining, you to reduce workplace accidents." Responding to Interview Question 5, participant P5 remarked, "For associated benefit, I will say, is not only to the workers. So, we have what accrues for workers - workplace safety improvement, job security, and motivation."

Researchers have demonstrated that transformational leadership is an appropriate style, where leaders engage with followers and create a connection that raises the level of motivation and morality in both the leader and the follower (Kim & Jung, 2019; Shen et al., 2017). The desire and commitment to deliver an injury-free workplace will require leaders to implement innovation (Yang et al., 2019). Responding to Interview Question 6, participant P1 attested:

> We are always proactive, and when there is an issue, we resolve them on time, so they do not have an impact on the activities. We have a unionized workforce, … we have quarterly meetings to discuss some operational challenges.

In response to Interview Question 6, participant P2 commented, "On the employee, the challenge you will face is when there is a delay in salary payment. So, communication is key here. Anytime there is a delay, engage employees by letting them know the reasons and when they should expect payment." Responding to Interview Question 6, participant P3 illustrated, "For instance, when we decided to bring on service providers as part of our strategy, the employees thought it would make them redundant."

In response to Interview Question 6, participant P4 opined, "When this happens, we engage and train workers on the new strategy we are bringing on board. Also, we give people incentive to motivate them."

With skill and experience, the leadership also creates the working conditions by developing safety protocols, which workers follow to achieve a safe workplace (Zhang et al., 2020). Responding to Interview Question 7, participant P3 stated, "We have a town hall meeting on Friday where both management and the entire workforce meet to discuss the new strategies thoroughly." In response to Interview Question 7, participant P4 said, "We engage the workforce through meetings to communicate our strategies. Where they have concerns, they bring them up, and we can resolve them." Participant P4 concluded, "Because we practice an open-door policy and management is very approachable, employees feel inclusive, and so they accept strategy much easier and this has helped to maintain a good relationship with workers." Responding to Interview Question 7, participant P5 remarked, "Through employee engagement to disseminate organization strategy to them." In response to Interview Question 8, some participants attested:

- "We also attend workshops to educate our workers." (P1)

- "We have a doctor on-site and three nurses so for the hours that we are working … we educate the people about fire management. Knowing our state of people's mind is also very important." (P2)

- "When we started the operation, there were few professionals. At a certain point, we employed the professionals we needed in the mining sector – geologists,

mining engineers, metallurgists, environmentalists. We have highly qualified

people within the mining area." (P3)

- "To summarize, management relationship with employees is very cordial." (P5)

The participants' responses to Kim and Jung's (2019), Singh and Misra's (2020)

and Zhang et al.'s (2020) statements that business leaders use effective human resources

management and communication as a strategy to implement and maintain responsible

mining while also maintaining or growing revenues and profits. The study findings

demonstrated that ASM managers used human resources management and

communication to implement and maintain responsible mining while maintaining or

growing revenues and profits in Ghana. As applied in this study, 100% of the participants

attested using human resources management and communication as a strategy to

implement and maintain responsible mining while also maintaining or growing revenues

and profits.

Theme 3: Optimizing Mining Techniques

The use of substandard mining processes caused the loss of over 70% of gold

through ASM activities in Ghana (Bansah et al., 2018). The ASM managers may thus

rely on emerging technology to drive innovation when implementing responsible mining

(Yang et al., 2019). The theme, optimizing mining techniques, emerged from Interview

Questions 1-5 and 8. All participants attested using optimizing mining techniques to

implement and maintain responsible mining while also maintaining or growing revenues

and profits.

The intense competition in the business environment has necessitated SMEs' use of emerging technology and innovation to enhance performance (Ju et al., 2020). The poor mining practices by ASM cause substantial loss of profitability and workforce injury (Bansah et al., 2018). Responding to Interview Question 1, participant P3 stated, "Another thing we do to sustain the mine is what we call ore blending. We blend the high grade and the low grade as a strategy to meet production and at the same time increase the mine life." Furthermore, participant P3 said, "Again, small-scale mining or alluvial mining is "infamous" because they destroy water bodies. Our strategy is to develop a series of dams to treat the effluent water so that we recycle the water for our activities." Responding to Interview Question 2, the participants remarked:

- "When you compare prediction and recovery, it can help you to check your performance and if the differences are less than 5%, … then it is within the acceptable limit in the mining industry." (P1)

- "We do a baseline study and monitoring. … If the results are beyond the baseline, then you investigate to find the cause - whether or not it is as a result of your operation." (P2)

- "We report to the state institutions on our operational activities, and we receive feedback from these institutions, … the parameter we use to measure the effectiveness of our strategy." (P3)

- "If you compare our operation with other small-scale mining organizations, we have a plant, and as we feed the plant, we make sure we check our losses. We do about 90 -95% while they make about 50-60% recovery." (P4)

- "I measure the success by ensuring we meet our objectives and criteria set for success - timelines, cost, community support." (P5)

Small business owners should promote innovations to survive in a competitive business environment, as innovation helps achieve business goals by driving entrepreneurial performance (Zeb & Ihsan, 2020). In response to Interview Question 3, participant P3 affirmed, "The ore blending strategy has worked well to meet production goals and revenue. Also, third-party involvement in the mining – bringing other small-scale mining companies to mine on our property to maximize revenue." Responding to Interview Question 3, participant P4 noted, "In our operation, we have a system that recovers the gold in three sections (primary, secondary, and tertiary). The primary recovers about 90% recovery, secondary does about 6%, and the rest in the tertiary." In response to Interview Question 4, participant P1 opined, "Efficient operation is to look at all the parameters like recovery, running hours, the various variables you use to generate the revenue - you predict then you achieve." In collaboration, participant P2 added, "Also, as part of the strategy, you buy quality machinery that will be durable. Also, you do not miss servicing time. You make sure that when machinery is due for services, you do so accordingly."

Managers and leaders in the ASM industry should develop strategies for implementing and maintaining responsible mining through the effective management of the industry's internal resources to improve the mining processes for revenue growth (Pokorny et al., 2019). Xiang et al. (2019) stated that governance structure within the SME sector drives innovation and the use of technology. Responding to Interview

Question 5, participant P3 opined, "Also, cost saving - we are efficient in our mining activities which have brought huge cost savings." In response to Interview Question 5, participant P4 commented, "So at the end of the day, if you do responsible mining, you improve gold recovery and improve sustainability." Responding to Interview Question 8, participant P1 affirmed, "We spend some of our money in further exploration in the hard rock so that there will be a transition from alluvial to hard rock mining, so the community will benefit from moving; from alluvial to hard rock mining." In response to Interview Question 8, participant P4 stated, "Let me say that there was water pollution within our operational areas before we started mining due to activities of some small-scale mining. We constructed dams to recycle our effluent water."

The participant's responses to the interview questions aligned with Ju et al.'s (2020), Xiang et al.'s (2019), and Zeb and Ihsan's (2020) statements that business leaders use innovation to improve organizational performance. The study findings demonstrated that ASM managers used optimization of mining techniques to implement and maintain responsible mining while also maintaining or growing revenues and profits. As applied in this study, 100% of the participants attested using optimization of mining technique as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Theme 4: Regulatory and Portfolio Management

Ghana's environmental policy requires mining companies to undertake an environmental impact assessment before companies get approval to execute mining projects (Bedu-Addo et al., 2019). Liller et al. (2018) reiterated the consistent

enforcement of health and safety policies and standards to impact the prevention of workplace incidents positively. The formalization of the ASM sector is critical to improving competitiveness. Inadequate supervision by regulatory agencies promotes low-level technology in the ASM sector (Kinyondo & Huggins, 2020). The theme, regulatory and portfolio management, emerged from Interview Questions 3 and 5-8. Eighty percent of the participants attested using regulatory and portfolio management as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Ofosu et al. (2020) posited that the economic importance of the ASM sector to livelihoods had necessitated the need for the enforcement of resources policy to ensure the proper management of the industry. Consistency in applying and implementing standards remains a crucial concern to the AMS industry (Pickering, 2020). Responding to Interview Question 3, participant P1 opined, "The strategy is integrating the activities across the mining chain." In response to Interview Question 3, participant P2 commented, "All these regulations when you flout you will pay penalties. So, you need to follow and comply with all the regulatory requirements - you do proper maintenance of your machinery and mine within the required distance from the water bodies." Responding to Interview Question 3, participant P5 remarked, "The strategy that has worked well includes diversifying the activity - alluvial to hard rock exploration, demonstrations of good leadership, and having good business acumen." In response to Interview Question 5, participant P1 attested, "The related benefit of responsible mining into our activities is that we meet the institution requirements. We meet the guidelines of the institution like

the mineral commission (MINCOM), water commission, and environmental protection

agency (EPA) - you meet all their guidelines."

The large-scale mining companies in Ghana work under strict regulatory policies

that ensure the use of international best practices in mining and processing mineral

resources, thereby reducing wasteful utilization of the mineral resource and increasing

revenues and profit (Ofosu et al., 2020). Melo et al. (2020) noted that proper governance

systems and project portfolio management best practices ensure accountability needed in

innovation project implementation. In response to Interview Question 6, participant P3

affirmed, "And then the streams around us, the law allows us to divert them when we

need to because of our activities." Responding to Interview Question 7, participant P1

remarked, "We submit a monthly report to the monitoring institutions: water commission,

EPA, inspectorate division, have routine checks/visits to check on what we are doing –

covering mining, environment, safety, and others." According to participant P1, "During

the meetings - the regulators give us feedback on our operation, we correct these things,

and report back through monthly, quarterly, and yearly reports." Responding to Interview

Question 7, participant P2 stated, "Also, we submit reports every month to EPA and

MINCOM. Everything on mining, environment, occupational health and safety, fire

management, water quality, air and noise management." In response to Interview

Question 8, participant P1 attested, "Other additional information is that we always

participate in public activities organized by MINCOM, EPA, water commission."

The participant's responses to the interview questions demonstrated that

regulatory and portfolio management is essential to implement and maintain responsible

mining while also maintaining or growing revenues and profits. Eighty percent of the ASM managers who participated in this study confirmed using regulatory and portfolio management as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits. The participants' responses aligned with assertions that business leaders should adopt strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. The study findings demonstrated that ASM managers used regulatory and portfolio management to implement and maintain responsible mining while also maintaining or growing revenues and profits in Ghana. As applied in this study, 80% of the participants attested using regulatory and portfolio management as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Findings Related to Mckinsey 7S Framework

McKinsey's 7S framework describes the seven elements within an organization, the implication of the interrelationships among the elements, and the generic form, which makes it applicable to evaluate the performance of many businesses (Awino & Adwet, 2017). Tien et al. (2019) affirmed that employees are organizations' critical assets, implying that leaders must consider their recruitment and retention as essential components in organizational successes. The staff element represents the design of the human resources system in organizations for the smooth execution of business objectives (Javied et al., 2019). Managers' consistent engagement with staff within the organization creates the condition for active alignment of the other elements in the McKinsey framework (Mafuta, 2020). The use of human resources management and communication

enhanced the implementation and maintenance of responsible mining, thereby maintaining or growing revenues and profits. The study findings indicate that ASM managers ensured growth in their corporate profits by implementing effective strategies based on the McKinsey 7S framework. As applied in this study, all participants attested using a combination of strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Implementing an organization's strategy requires forging alignment between the critical internal elements of the organization (Dyer et al., 2016; Polyanska et al., 2019). Waterman et al. (1980) showed that business leaders should include systems and strategies as value-added elements to the organization. According to Dyer et al., leaders achieve effective implementation of their organizations' strategy when they ensure proper alignment of the elements in the McKinsey 7S framework with each other. CSR and stakeholder engagement are essential in ensuring responsible mining to maintain or grow revenues and profits. As applied in this study, ASM managers should establish effective strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. Based on the themes from the participants' responses, the seven elements of the Mckinsey 7S framework were present in the blend of strategies ASM managers used to implement and maintain responsible mining while also maintaining or growing revenues and profits. All participants confirmed the Mckinsey 7S framework regarding using CSR and stakeholder engagement as a strategy to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Fajartriyani et al. (2019) argued that a business strategy articulates a long-term plan of an organization that reinforces its strong vision, mission, and values. Sheehan and Powers (2018) argued that business strategy must relate to the firm's value proposition to its stakeholders, the processes, and the human resource needed to deliver the value proposition and profitability target. When ASM managers implement effective strategies, they ensure effective implementation and maintenance of responsible mining while also maintaining or growing their organizations' revenues and profits. As applied in this study, ASM managers should establish strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. All participants confirmed the Mckinsey 7S framework regarding strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits.

The system category includes information systems, communication, procedures, performance evaluation, and methods for improving the efficiency of project execution (Bansah et al., 2018; Dyer et al., 2016). The system element includes formal procedures for identifying, measuring, controlling, and monitoring an organization's processes (Waterman et al., 1980). Awino and Adwet (2017) demonstrated that systems are instruments that organizations use to implement business strategies. As applied in this study, ASM managers should establish strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. All participants confirmed the Mckinsey 7S framework regarding strategies to improve the implementation and maintenance of responsible mining while also maintaining or growing revenues and profits. All participants' responses validated the application of the

Mckinsey 7S framework to implement and maintain responsible mining while also maintaining or growing revenues and profits.

The soft elements of the McKinsey 7S framework are style, staffing, skills, and shared values (Cox et al., 2019). Successful organizations align business strategy with the soft elements of the McKinsey 7S model to improve performance through creativity and innovation, which results from a change in employee behavior, job satisfaction, motivation, and reward system (Kim, 2018; Thuan & Thanh, 2019). The tenets of the Mckinsey 7S framework aligned with the study objective of exploring the strategies that ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The ASM managers applied systems, strategy, structure, style, staff, skills, and shared values to implement and maintain responsible mining while also maintaining or growing revenues and profits. All participants used various strategies involving corporate social responsibility and stakeholder engagement, human resources management and communication, optimizing mining techniques, and regulatory and portfolio management. As applied in this study, all participants applied the Mckinsey 7S framework's critical elements to implement and maintain responsible mining while maintaining or growing revenues and profits in Ghana.

Applications to Professional Practice

Identifying the strategies that ASM managers use to implement and maintain responsible mining is crucial to maintain or grow revenues and profits. The lack of management strategy results in wasteful exploitation of the mineral resource, with

adverse environmental and social impacts (Bansah et al., 2018). The poor mining practices cause substantial loss of profitability and workforce injury (Bansah et al., 2018). All participants affirmed using a combination of strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. The study results could help ASM managers implement and maintain responsible mining while also maintaining or growing revenues and profits. The study findings could significantly contribute to teamwork, information sharing, and collaboration among ASM managers seeking strategies to implement and maintain responsible mining while maintaining or growing revenues and profits. Some ASM managers with weak strategies may apply this study's findings to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Inadequate strategic management practices in the ASM industry result in wasteful mineral resource recovery and utilization (Zvarivadza, 2018). According to Bansah et al. (2018), investors in ASM lose about 70% of gold due to a lack of technological involvement and inadequate skills. All participants acknowledged that corporate social responsibility and stakeholder engagement, human resources management and communication, optimizing mining techniques, and regulatory and portfolio management were fundamental to improving responsible mining while maintaining or growing revenues and profits. Based on the study findings, the most significant contribution to professional practice may be identifying potential strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. ASM managers could use this study's results to implement and maintain

responsible mining while also maintaining or growing revenues and profits. The study findings could provide ASM managers with a practical model for implementing and maintaining responsible mining while also growing revenues and profits. The practical model could serve as a basis for improving responsible mining while maintaining or growing revenues and profits.

The wastefulness of the mineral extraction processes from substandard methods by ASM has benefited some large-scale mining companies in Ghana by extracting gold from the residue of ASM mining fields (Bansah et al., 2018). Studies show that employees' lack of skills poses a hazard and increases safety risk at the workplace (Shen et al., 2017). This study's findings could provide ASM managers with knowledge on how to implement and maintain responsible mining while also maintaining or growing revenues and profits. The findings from this study could significantly enhance business revenues and profits by implementing strategies to ensure responsible mining. The findings from this study could contribute to the literature on responsible mining to maintain or grow revenues and profits in the mining industry. New and upcoming ASM managers may use the study findings to understand the importance of implementing strategies and best practices to enhance responsible mining while maintaining or growing revenues and profits.

Inadequate supervision by regulatory agencies promotes low-level technology in the ASM sector (Kinyondo & Huggins, 2020). Ofosu et al. (2020) posited that the economic importance of the ASM sector to livelihoods had necessitated the need for the enforcement of resources policy to ensure the proper management of the industry. The

findings from this study could contribute to the literature on ASM sustainability. The study findings might add value to the ASM business community by disseminating information regarding strategies for implementing and maintaining responsible mining while also growing revenues and profits. The study findings may benefit business leaders, including governmental and non-governmental agencies, entrepreneurs, and SME owners, to gain helpful information on strategies to implement and maintain responsible mining while maintaining or growing revenues and profits.

Implications for Social Change

The use of substandard mining methods poses some challenges to the sustainability of the ASM industry because of the prevalent workforce injuries and wastefulness in gold extraction, which cause loss of revenues and profits (Ajith & Ghosh, 2019). By improving efficiency in mining processes, ASM managers could increase profitability and increase the industry's competitiveness and sustainability. As illustrated in the study findings, efficient strategies might assist ASM managers in sustaining their business and providing social amenities and educational empowerment to the local community. The implication for a positive social change for this study was improving the ASM industry's performance through responsible mining by eliminating wasteful utilization of the mineral resource and enhancing employee safety, thereby improving the quality of life within the mining communities. With improved business sustainability, ASMs would fulfill their CSR and pay more corporate taxes, which local and state governments could use to provide social amenities to the community.

The use of substandard mining methods poses some challenges to the sustainability of the ASM industry because of the prevalent workforce injuries and wastefulness in gold extraction, which cause loss of revenues and profits (Ajith & Ghosh, 2019). To promote the growth of the ASM industry, a business leader should improve the gold recovery process to increase revenues and profits (Bansah et al., 2018). The study findings might contribute to positive social change by helping ASM managers understand the challenges in the mining sector and gain adequate knowledge of strategies to ensure responsible mining while also maintaining or growing revenues and profits. By sustaining their businesses, ASM managers would provide job opportunities to local citizens for improved quality of citizens' lives and promote economic growth in the local community. The study findings could promote the sustainability of ASMs, resulting in the growth of other enterprises, social infrastructure development, and improved living conditions and social well-being of the regional community.

In Ghana, ASM promises substantial economic prospects because many mining towns obtain their livelihood from the activities through employment generation (Bansah et al., 2018). The activities of ASM have gained prominence in Africa with substantial economic opportunities (Owusu et al., 2019). The implication for a positive social change for this study might also broaden ASMs survival knowledge, thus promoting overall positive changes for the society. The ASM sector can influence the economic development of rural communities, promote job stability, and provide economic support to both new and existing business enterprises in the mining localities. The general public and global communities might learn from the strategies that ASM managers use to ensure

responsible mining while also maintaining or growing revenues and profits, which could inspire a positive social change in the perception of ASMs.

Recommendations for Action

An effective strategy is essential to implement and maintain responsible mining while also maintaining or increasing revenues and profits. ASM activity contributes to the economy of many developing countries; the deficient mining and mineral processing techniques by most companies pose severe threats to the utilization of the natural resources, workforce, and natural environment (Owusu et al., 2019). The mining processes of many ASM companies involve the use of low-level, wasteful, and substandard technology but high labor-intensive for prospecting, extraction, and processing of gold (Ofosu et al., 2020). In Ghana, some large-scale mining companies have benefited by extracting gold from the residue of ASM mining fields (Bansah et al., 2018). To sustain the mining industry, ASM managers should devise excellent strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. I recommend that ASM managers implement a blend of strategies to ensure responsible mining while also maintaining or growing revenues and profits.

To ensure business sustainability, ASM managers should establish strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. With skill and experience, the leadership also creates the working conditions by developing safety protocols, which workers follow to achieve a safe workplace (Zhang et al., 2020). The significant effects on the ecosystem and human health include high exposures to mercury and other heavy metals, occupational injuries and noise

exposure, deforestation, land degradation, and water and sanitation issues (Pokorny et al., 2019). Misiurek and Misiurek (2020) considered an organization's leaders, employees, tasks, and work environments as areas to focus on when examining workplace safe. I recommend that ASM managers adopt effective strategies to improve responsible mining while also maintaining or growing revenues and profits, thereby enhancing productivity to sustain their businesses.

Ensuring employee safety and stakeholder engagement is a valuable tool that ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The poor mining practices by ASM cause substantial loss of profitability and workforce injury (Bansah et al., 2018). Inadequate supervision by regulatory agencies promotes low-level technology in the ASM sector (Kinyondo & Huggins, 2020). According to Hald (2018), employees are motivated in a safe work environment and involved with their organizations emotionally, which substantially improves performance. I recommend that ASM managers implement CSR and stakeholder engagement, human resources management and communication, optimizing mining techniques, and regulatory and portfolio management as a blend of strategies to improve responsible mining while also growing revenues and profits.

Some ASM managers lack strategies for ensuring responsible mining while maintaining or growing revenues and profits. The study findings indicate that ASM managers use a combination of strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. I recommend that ASM managers have adequate training, education, skills, and experience to adopt appropriate

strategies to implement and maintain responsible mining while maintaining or growing revenues and profits. I will disseminate the findings of this study to the interested public through publications in business and academic journals, knowledge sharing in my place of employment, network, and social media, and presentations at conferences, training, and seminars.

Recommendations for Further Study

The purpose of this qualitative multiple case study was to explore strategies some ASM managers in Ghana use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The study findings, recommendations, and conclusions might contribute to existing and future research and close gaps in business practice regarding strategies that ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. The lack of management strategy results in wasteful exploitation of the mineral resource, with adverse environmental and social impacts (Bansah et al., 2018). Yin (2018) stated that qualitative researchers could use a sample size of between five and 50 participants. A significant limitation of this study was the small sample size of five ASM managers from five ASMs in Ghana. By using smaller or larger sample sizes, researchers could generate different themes that differ significantly from this study's findings. Therefore, I recommend that future researchers explore using a larger sample size, which could provide helpful insight into strategies that ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Harry and Fenton (2016) indicated that researchers use the qualitative method to examine participants' experiences within a socialistic setting. The research participants in qualitative research must understand the study topic and help answer the research question (Yin, 2018). This study was limited to a cross-sectional, exploratory qualitative, multiple case study involving the semistructured interview to collect primary data from five ASM managers in Ghana. I recommend that further studies use longitudinal, quantitative or mixed methods, involving diverse participants from varying levels of management at different continents such as Asia, America, and Europe.

Managers and leaders in the ASM industry should develop strategies for implementing and maintaining responsible mining through the effective management of the industry's internal resources to improve the mining processes for revenue growth (Pokorny et al., 2019). My competency and knowledge of doctoral study are evolving because I am a novice in academic research. Consequently, this study was limited to my subjective appraisal and correct interpretation of the participant's responses to the interview questions. Also, the study was limited to my personal beliefs and professional background with the topic involving the strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. Finally, the study was limited to the accuracy of information from the participants and the availability of company public documents. I recommend that future researchers comprise experts from related multi-disciplines in ASM's responsible mining for improved profitability to divulge some details I must have omitted in this doctoral study.

Reflections

In conducting this multiple case study, I explored the strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. From the study findings, I gained an in-depth knowledge of the research problem from five ASM managers in Ghana regarding their use of different strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. I learnt that ASM managers use a similar blend of strategies, including CSR and stakeholder engagement, human resources management and communication, optimizing mining techniques, and regulatory and portfolio management to ensure responsible mining while growing revenues and profits. My new knowledge and understanding of the research problem positively changed my preconceived ideas and values, beliefs, and personal bias and perceptions about the strategies ASM managers use to improve responsible mining while growing revenues and profits.

This study involved using the purposive sampling technique to select five ASM managers in Ghana who have over 5 years of experience in responsible mining and had successfully used strategies to maintain or grow revenues and profits. Using the purposive sampling technique, I selected participants who had the pertinent knowledge, experience, competence, skills, and education to answer the research question. I interacted with the participants during the purposive sampling process, which enabled me to improve my networking, negotiation, interpersonal, inspirational, collaborative, and emotional intelligence skills.

Because I preferred the qualitative research method, I conducted semistructured interviews and interacted with the participants, which improved my communication, critical thinking, analytical, ethical, listening, observant, self-confidence, and problem-solving skills. By interviewing the participants at their desired time and location, the respondents expressed themselves freely, which allowed me to gain an in-depth knowledge of the research problem. During the data organization and analysis process, I understood the research problem, which enabled me to identify the themes and patterns and establish the study findings. Consequently, I gained a better understanding of the doctoral study research process, improving my academic research work skills.

Summary and Study Conclusions

ASM managers face challenges in using effective strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits. This qualitative multiple case study aimed to use Mckinsey 7S framework to explore the strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. I administered eight open-ended questions through semistructured interviews with five ASM managers from five ASM companies in Ghana to collect the primary data to answer the research question. Secondary data source included company public documents. The four themes that emerged from the thematic analysis of data were (a) CSR and stakeholder engagement, (b) human resources management and communication, (c) optimizing mining techniques, and (d) regulatory and portfolio management. The study findings indicated that ASM managers used a blend

of strategies to implement and maintain responsible mining while also maintaining or growing revenues and profits.

Adapting strategies might help ASM managers to ensure responsible mining while also maintaining or growing revenues, thereby generating economic growth for local communities. With improved responsible mining, ASM managers would execute CSR initiatives and pay more corporate taxes, which federal, state, and local governments could use to provide social amenities to the local citizens. Also, ensuring responsible mining might help ASM managers grow their firms' revenues and profits, thereby, would continue to provide job opportunities to the residents. The general public might learn from the study findings the strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. Using the Mckinsey 7S framework as a lens for this study involving strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits may fill a gap in the literature on ASM. The study findings align with previous scholars' conclusions regarding the need to implement effective strategies to ensure responsible mining while maintaining or growing revenues and profits.

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Appendix A: Interview Protocol

I will use the following interview protocol:

1. I will introduce myself to the participant as Walden University doctoral student and inform him/her of the time and the purpose of the interview.

2. I will review the consent form with the participant to read and sign.

3. I will inform the participant of an audio-recording of the interview; I will also request the participant's background information:

    a. How many years have you been an ASM Manager?

    b. How many years of experience in implementing responsible mining?

4. I will ask for any other information the participant would like to share and finally thank the interviewee for participating, conclude the interview, and stop the audio recording.

Appendix B: Interview Questions

Participants in this study will be requested to respond to open-ended interview questions in a semistructured process. The interview questions are:

1. What strategies did you design and implement for ensuring responsible business in your organization's ASM projects?

2. How does your organization measure the effectiveness of responsible business strategies?

3. What strategies also worked well to ensure maintaining responsible business to achieve revenue increases?

4. What elements are part of your strategies to deliver ASM projects efficiently?

5. What, if any, concomitant benefits have responsible mining implementation brought to increasing operational efficiencies in your organization?

6. What difficulties do you experience when implementing new business strategies in your organization??

7. How does the organization communicate strategies that will efficiently deliver ASM projects?

8. What additional information can you provide about your organization's strategies for responsible mining that have also maintained or grown revenues and profits?

Appendix C: Letter of Invitation

Email Invitation

Dear (Participant Name)

My name is Cornelius Mireku-Antwi, and I am a Doctor of Business Administration

(DBA) candidate at Walden University. I am conducting a research study about strategic management practices for responsible mining in Artisanal and Small-scale Mining (ASM) projects in Ghana. In this study, I will explore strategies ASM managers use to implement and maintain responsible mining while also maintaining or growing revenues and profits. There are some specific criteria for participants to be included in this study. They are:

- The participant must be experienced managers of the ASM industry in Ghana
- Must have successfully implemented and maintained responsible mining in the ASM project.

If you meet the above criteria and agree to be in this study, please contact me via

email at Cornelius.mireku-antwi@waldenu.edu or by phone at 0243314496. I will ask you to sign a consent form (attached to this email). You can decide if you would want the interview to be face-to-face or by phone. I will schedule an appointment convenient for you. The interview should last no more than 60 minutes.

Thank you for this opportunity for me to involve you in this important study.

Kind Regards

Cornelius Mireku-Antwi

(Student ID: A00755455)

Doctoral Candidate

Walden University

Appendix D: CITI Certification

CITI PROGRAM

Completion Date 09-May-2021
Expiration Date N/A
Record ID 42421930

This is to certify that:

Cornelius Mireku-Antwi

Has completed the following CITI Program course:

Not valid for renewal of certification through CME.

Student's
(Curriculum Group)
Doctoral Student Researchers
(Course Learner Group)
1 - Basic Course
(Stage)

Under requirements set by:

Walden University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w523684e8-59ea-421d-b3ed-924442ef252c-42421930