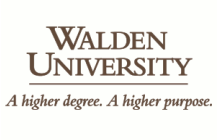

2019

Success Factors for Power Project Development Businesses in Sub-Saharan Africa

Kodjo Galevissi Afidegnon
Walden University

Walden University

College of Management and Technology

This is to certify that the doctoral study by

Kodjo Afidegnon

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Alexandre Lazo, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Richard Johnson, Committee Member, Doctor of Business Administration Faculty

Dr. Timothy Malone, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2019

Abstract

Success Factors for Power Project Development Businesses in Sub-Saharan Africa

by

Kodjo Afidegnon

MS, University of Toledo, 2006

MS, University of Lomé, 2001

BS, University of Lomé, 1999

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2019

Abstract

Despite the financing gap in the sub-Saharan Africa power sector, private investors struggle to capitalize on the opportunity because of the high failure rate of power project development companies. Using the conceptual framework of the behavioral finance theory, this multiple case study was conducted to explore the strategies used by executives of 4 companies in sub-Saharan Africa who successfully developed power projects within the last 5 years. Data were collected from semistructured interviews and a review of government and institutions' websites. Yin's 5-phased cycle for analyzing case studies provided the guidelines for data analysis. Three themes emerged from data analysis: market knowledge, stakeholder alignment, and commercial viability. Findings revealed strategies that current and aspiring power project development company executives may use as a guide to mitigate business failure risks. Implications of these findings for positive social change include the potential to increase the power generation capacity in sub-Saharan Africa and provide electricity to many of the 620 million Africans who currently lack access. Implications also include poverty alleviation and economic growth through creation of successful power project development companies.

Success Factors for Power Project Development Businesses in Sub-Saharan Africa

by

Kodjo Afidegnon

MS, University of Toledo, 2006

MS, University of Lomé, 2001

BS, University of Lomé, 1999

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2019

Dedication

I dedicate this study to my late mother, Sossi Kondo, and my late wife, Yawa Mawusi, who were inspirational in my life and provided the support and endurance to achieve my educational dreams. I also dedicate it to my father, Kouami Valentin Afidegnon, who taught me the importance of education very early in my upbringing. Special mention to my wonderful partner, Edna Selasse, and my children, Nathanael and David Afidegnon, who provided extraordinary support throughout this doctoral journey and encouraged me to press on and stay focused.

Acknowledgments

I want to thank my Lord and Savior Jesus Christ who has always been there for me in every situation in my life and who upheld me to become who I am today. Loving God, You provided me with ALL I needed to complete my study. How amazing You are!

My special gratitude to Dr. Alexandre Lazo, my mentor and dissertation chair, who encouraged and supported me throughout this journey. I could not have made it this far without your outstanding mentoring. I would also like to thank my second committee member, Dr. Richard Johnson, for your valuable and timely feedback. Thanks to Dr. Timothy Malone for your extensive feedback and encouragement.

My gratitude also goes to my friends, Folly Hemazro-Somado and Gilles Mevo, for their support and encouragement. I would like to recognize my lifetime friends, Pr. Machidude Pio, Scot Smith, Yves N'DA, Edem Darrah, Komi Darrah, Patrick Wallace, and Martin Adonsou, for believing in me and being beside me for this journey. For friends, faculty, and family members who are not listed here, they know who they are.

Table of Contents

List of Tables

Section 1: Foundation of the Study

Background of the Problem

There is a yearly investment need of at least 21 billion U.S. dollars (USD) in the sub-Saharan Africa power sector until 2027 (Eberhard, Gratwick, Morella, & Antmann, 2017a). Securing such an investment is a challenge due to limited national public finances and insufficient capabilities among multilateral agencies and development financial institutions. As a result, there is a significant financing gap in the sub-Saharan Africa power sector. That situation offers the private sector an investment opportunity of 10 billion USD each year in the region (Chirambo, 2016; Szabó, Moner-Girona, Kougias, Bailis, & Bódis, 2016). The International Renewable Energy Agency estimated the total theoretical renewable energy potential of Africa at around 1.6 billion Gigawatt hours (IRENA, 2015). The shortage of current power generation capacity, the increasing demand, the investment gap, and the enormous renewable energy resources constitutes a significant opportunity for global power companies (Eberhard, Gratwick, Morella, & Antmann, 2016). Before the private equity funds, pension funds, global power companies, banks, and multilateral lenders decide to invest, a company needs to move power projects from the concept phase to investment opportunities. Businesses called development companies, play that role by identifying power generation opportunities, gauging the fundamental market characteristics, engaging with governments and electric utility companies, conducting feasibility studies through dedicated consultancy firms, and completing all required activities to transform power generation ideas into bankable investment opportunities (World Bank, 2016). Project developers work with financiers,

technology suppliers, engineering firms, legal counsel, and others to identify appropriate sites for energy projects, secure access to transmission infrastructure, interconnect facilities, and comply with government information reporting requirements (Enevoldsen & Sovacool, 2016; Rohankar, Jain, Nangia, & Dwivedi, 2016).

Power project development is viewed as an entrepreneurial activity subject to risks and requiring an ongoing investment of time, financial resources, and political resources to promote projects. In sub-Saharan Africa, there is a high failure rate of power project development companies, resulting in a significant loss of money (Eberhard et al., 2017b). The intent of this study was to address critical success factors of power project development companies in sub-Saharan Africa.

Problem Statement

Private investors are not capitalizing on the opportunity of more than 20 USD billion per year in the electricity generation sector in sub-Saharan Africa (Ouedraogo, 2017). Less than 20% of power generation projects reach completion, and 35% of completed projects face arbitration, financial distress, or change of contracts within the first 5 years (Eberhard et al., 2016; Pauw, 2015). The general business problem was a high failure rate for power project development businesses in sub-Saharan Africa. The specific business problem was some executives of power project development companies lack strategies to conduct successful businesses ventures in sub-Saharan Africa.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies that executives of power project development companies in sub-Saharan Africa use to

operate successful businesses in sub-Saharan Africa. The sample population included four executives who had successfully developed independent power generation projects in sub-Saharan Africa in the past 5 years. I collected data through open-ended interview questions. This study may contribute to social change by enabling more successful power generation businesses in sub-Saharan Africa, and thereby provide electricity to many of the 620 million Africans who currently lack access.

Nature of the Study

I used a qualitative case study design to answer the research question. Qualitative methods are instrumental in exploring contemporary, real-life situations, understanding a phenomenon, answering questions, and capturing descriptions of human experiences (Houghton, Murphy, Shaw, & Casey, 2015; Runfola, Perna, Baraldi, & Gregori, 2017). The focus of this study was to explore strategies executives of power project development companies can use to conduct successful business ventures in sub-Saharan Africa. Therefore, the qualitative method was suitable. The quantitative method did not suit the needs of this study because this method involves collecting numerical data, testing hypotheses, and finding potential relationships between two or more variables (Watson, 2015); testing a hypothesis was not the goal of this study. The mixed-methods approach combines the quantitative and qualitative approaches in a single study and is used to compensate for the limitations of quantitative and qualitative methods (Almalki, 2016). The mixed-methods approach did not suit the requirements of this study because it did not require quantitative research.

The goal of a qualitative case study is to make sense of a social phenomenon in its natural setting through classification and analysis of data related to that phenomenon and exploration of a bounded system over time through detailed, in-depth data collection involving multiple data sources in a rich, real-life framework (Gaya & Smith, 2016; Houghton, Casey, Shaw, & Murphy, 2013). A multiple case study was the most suitable design to explore strategies that supported successful power project development ventures in sub-Saharan Africa. Schmidt (2016) asserted that the phenomenological research designs are used to achieve a deeper understanding of a given phenomenon by describing structures of gained experiences; therefore, a phenomenological design was not appropriate for the study. The grounded theory design is used to generate new theories, going beyond descriptions of individual lived experiences (Urquhart & Fernández, 2016). The objective of the current study was not to develop a new theory; therefore, the grounded theory design was not suitable. The ethnographic design provides a framework for a cultural study of specific groups in which researcher can collect interview data in a traditional setting over a sustained period (Cahyadi & Prananto, 2015; Lewis, 2015). The ethnographic design was not suitable for this study, which focused on the strategies, executives of power projects development companies use, rather than on the culture of a certain group.

Research Question

The overarching research question for this study was the following: What strategies do executives of power project development companies use to conduct successful business ventures in sub-Saharan Africa?

Interview Questions

1. What are the most significant challenges faced when developing power projects in sub-Saharan Africa?
2. What critical steps did you follow during the process of developing a power project in sub-Saharan Africa?
3. What are the critical success factors when developing power projects in sub-Saharan Africa?
4. What are the main risk factors lenders require to be addressed before financing power projects in sub-Saharan Africa?
5. What business models have you used to successfully secure the debt financing of power projects in sub-Saharan Africa?
6. What are the barriers faced from local governments when developing power projects in sub-Saharan Africa?
7. What are the barriers to managing successful power projects in sub-Saharan Africa?
8. What are the regulatory barriers faced when developing power projects in sub-Saharan Africa?
9. What are your strategies for attracting equity investors into power projects in sub-Saharan Africa?
10. What additional information might you offer regarding successful power project development in sub-Saharan Africa?

Conceptual Framework

The theory of behavioral finance was the primary conceptual framework for the study. According to De Bondt and Thaler (1994), traditional finance theories such as the efficient market theory are based on the assumptions of universal rationality, which means the economic agents are assumed to be rational; therefore, they are efficient and unbiased processors of relevant information and their decisions are consistent with utility maximization. Traditional finance theories subsequently laid the foundation of the behavioral finance theory by combining economics and finance with psychology to present concepts, such as mental accounting, the endowment effect, and other biases (Vucinic, 2016).

According to behavioral finance theory, investors are subject to behavioral biases in their financial decision-making process (Vucinic, 2016). The exploration of the cognitive psychology literature has indicated evidence of these biases in a financial context (Singh, Goyal, & Kumar, 2016). Emotional factors are important for market movements focusing on a limited number of investor rationality; in addition, there are psychological effects on investing activities (Tuyon & Ahmad, 2016). Traditional finance theories apply to efficient markets in which relevant information is available and quickly reflected in prices (Ramiah, Xu, & Moosa, 2015). In markets such as sub-Saharan Africa, economic and financial tools available in developed countries do not exist (Gul & Chaudhry, 2014). In addition, the market presents several inefficiencies, and financial decisions are usually based on subjective risk perception (Gul & Chaudhry, 2014). The

behavioral finance theory was instrumental in explaining business financing challenges and providing strategies to overcome them.

Definition of Terms

This subsection includes definitions of key terms used in the study. These terms are industry specific and do not have clear descriptions. Therefore, their inclusion in this list was intended to provide clarity and understanding of the research phenomenon.

Electric utility: A public company in the electric power industry (often a public utility) that engages in electricity generation and distribution for sale and delivery to the public (Costello & Hemphill, 2014).

Environmental and social impact assessment (ESIA): A process for assessing and predicting the potential environmental and social impacts of a proposed project, evaluating alternatives and designing appropriate mitigation, management, and monitoring measures (Aucamp & Lombard, 2017).

Implementation agreement: An agreement that provides for direct contractual obligations and undertakings between the government and the supplier or project company because the government is not usually a party to the power purchase agreement (World Bank, 2016).

Independent power producer: A private entity that owns or operates facilities for the generation of electricity for sale to utilities, central government buyers, and end users (Qudrat-Ullah, 2015).

Partial risk guarantee (PRG): An insurance policy that covers private lenders and investors against the risk of the government (or a government-owned agency) failing to perform its obligations vis-à-vis a private undertaking (Yan, Sun, Zhang, & Liu, 2016).

Political risk insurance (PRI): Insurance that provides financial protection to investors, financial institutions, and businesses that face the possibility of losing money because of political events (Peinhardt & Allee, 2016).

Power purchase agreement: A contract between two parties, one who generates electricity and one who is looking to purchase electricity (Bruck, Sandborn, & Goudarzi, 2018).

Public-private partnership: A long-term contract between a private party and a government entity for providing a public asset or service in which the private party bears significant risks and management responsibility and remuneration is linked to performance (Iossa & Martimort, 2015).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are claims that the researcher assumes to be true without the possibility of verification and that are out of the researcher's control (Marshall & Rossman, 2015; Yin, 2014). The first assumption was participants involved in the study had the knowledge to provide useful information on the research topic. The second assumption was the implied similarities between countries with successfully developed projects and other sub-Saharan Africa power markets. The third assumption was that the

participants in this study would provide precise, honest, and truthful answers regarding individual experiences and perceptions.

Limitations

The limitations of a study involve potential weaknesses and drawbacks that are out of the control of the researcher (Marshall & Rossman, 2015). The first limitation was that participants may not have recalled experiences accurately, may not have wanted to share details of their success, and may have held back information related to the interview questions. The second limitation was that the study only included countries in which participants developed successful power generation projects and did not include power generation businesses in other sub-Saharan Africa countries.

Delimitations

Delimitations are the characteristics that define the scope and delineate the boundaries of the study (Lewis, 2015). The scope of the study involved executives of power project development companies in sub-Saharan Africa. Selecting participants beyond the sub-Saharan Africa region was not the purpose of this research. This study only included successful power generation projects developed in the region in the last 5 years.

Significance of the Study

Findings may be useful to increase the success of power project development ventures in sub-Saharan Africa. The lack of access to electricity produces adverse economic and social impacts (Lenz, Munyehirwe, Peters, & Sievert, 2017). Also, there

was limited research on power project development businesses in sub-Saharan Africa at the time of this study.

Contribution to Business Practice

This study may contribute to the body of knowledge of emerging markets by filling the gaps in ways of developing successful power generation projects. The strength of qualitative research is its ability to provide complex textual descriptions of how people experience or perceive a given phenomenon (Cleary, Horsfall, & Hayter, 2014). As a result of this study, power project development companies' executives may gain insight into critical factors and strategies to develop successful ventures in sub-Saharan Africa and alleviate the loss of profit and opportunity cost in power ventures.

Implications for Social Change

Researchers have demonstrated the importance of the electricity industry in the social welfare and economic development of a country, and studies have supported the correlation between country electricity access and gross domestic product (Balamurugan, Muralisachithanandam, & Dharmalingam, 2015; Furuoka, 2017; Isik, Dogru, & Turk, 2017). There is a significant opportunity loss for power generation companies that are unable to tap into the vast opportunity the sub-Saharan African power market offers (Shen & Power, 2017). The findings from this study may benefit African power sector stakeholders by providing strategies to develop successful power generation ventures. Findings may also be used to close the financing gap sub-Saharan African governments experience, to increase the electricity generation capacity of the region, and to improve the population's welfare.

A Review of the Professional and Academic Literature

In this section, I present a review and critical analysis of an extensive body of literature on sub-Saharan Africa, as well as key themes associated with the topic of the study. The purpose of this qualitative multiple case study was to explore the strategies that executives of power project development companies use to conduct successful businesses ventures in sub-Saharan Africa. The aim of a review and critique of an expansive body of research work and other professional literature was to summarize, compare, and contrast different perspectives of the research topic.

A literature review should include analysis and existing information on a study's research questions; the reviews facilitates the research process by presenting a discussion on previous findings on the topic (Paré, Trudel, Jaana, & Kitsiou, 2015). The literature review serves to provide a brief account of the literature related to the research question and to avoid duplication of existing research (Bandara, Furtmueller, Gorbacheva, Miskon, & Beekhuyzen, 2015; Tate, Furtmueller, Evermann, & Bandara, 2015). This literature review includes a critical discussion of the background of energy and power development in sub-Saharan Africa, reforms and energy development, energy as the engine of economic growth, and the business case. The review also addresses energy sector investments, sustainable and renewable energy, management competencies, and energy development in sub-Saharan Africa. In this section, I present a deeper level of insight and subject matter knowledge, identify the gap in the literature, and critically analyze the views from an extensive body of recent and relevant literature. The review provides a strong rationale for the problem and purpose of the study.

Literature Review Search Strategies

The main strategies to obtain quality literature and other sources for this study entailed searching business and management databases in the Walden University online library. The literature review included more than 60 peer-reviewed articles, 85% of which were published in the 5 last years. The database and search engines used to search for peer-reviewed full-text articles and other quality sources of information and literature included the following: ABI/INFORM Complete database, Google Scholar, ScienceDirect, Business Source Complete, Sage Premier, government databases, and ProQuest. The sources used in selecting information and literature specific to the study objectives included peer-reviewed journals, textbooks, articles, websites, government and regulatory agency websites, and other secondary sources. The key words used to find relevant sources in the databases included *power industry*, *energy*, *sustainable* and *renewable energy*, *electricity in sub-Saharan Africa*, and combinations of words and themes related to energy and the sub-Saharan region.

Behavioral Finance Theory

The behavioral finance theory provided a conceptual framework and the contextual set of propositions to review and analyze the study findings. Traditional financial theories were based on mathematics, but the theory of behavioral finance represents pertinent postulations that can aid the cognitive and emotional discernment of factors that impact the decision-making process of individuals and organizations (Hirshleifer, 2015). The behavioral finance theory can serve as a substitution for the behavioral portfolio theory, or mean-variance portfolio theory, and the behavioral asset

pricing model for the capital asset pricing model (CAPM) and other models in which only risks determine expected returns (Vucinic, 2016). In the context of risk assessment, Vucinic (2016) observed that the behavioral finance theory is an expansion of the financial field beyond portfolios, asset pricing, and market efficiency and is set to continue that expansion while adhering to the scientific rigor introduced by standard finance. It is critical to use the lens of a theory or theories to make a strong link between research aims and a set of theoretical perspectives (Ngai, Tao, & Moon, 2015). The selection of appropriate theories and the associated theoretical propositions can aid in providing new understandings of the phenomenon under study (Ngai, Tao, & Moon, 2015). Using a conceptual framework that is appropriate is also of great value when a researcher attempts to tie the results of the study to findings from other studies (Lyle, 2018; Ngai, Tao, & Moon, 2015). A conceptual framework allows a critical and holistic analysis of the research findings (Lyle, 2018). In this study, the emphasis was on ensuring that the selected conceptual framework was closely aligned with the identified problem to provide a lens for interpreting the findings.

The concept of behavioral finance has evolved (Ramiah, Xu, & Moosa, 2015). The movements of stock prices relate extensively to the mental attitude of market participants (Lim et al., 2018). The decisions in sub-Saharan Africa regarding electricity and energy distribution and availability require financial judgment and financials skills. A problem in most organizations is that managers focus on the need to fulfill financial goals and fail to see other strategic management techniques that can accomplish a lot more. The theory of behavioral finance enabled me to review the prudence of financial decisions.

Behavioral finance theory also enabled the analysis of behavioral and other impediments that constrain the choices that are relevant to sub-Saharan Africa.

There is an alternative to each of the foundation blocks of traditional finance theory (Moosa & Ramiah, 2017). First, Moosa and Ramiah (2017) argued that people are normal, contrary to the traditional finance theory's assumption. Second, markets are not efficient, even if competing and surviving are difficult for new and established players (Moosa & Ramiah, 2017). Third, people design portfolios, often according to the rules of behavioral portfolio theory (Moosa & Ramiah, 2017). Finally, the behavioral asset pricing theory describes the expected returns on investments where the differences in risk only cannot explain the differences in expected returns (Moosa & Ramiah, 2017). Hirshleifer (2015) argued in favor of more efficiency and suggested an integrated financial theory that includes behavioral finance and traditional financial theories. Gul and Chaudhry (2014) reasoned that the drawbacks of quantitative assessment seem more pronounced in cases of energy initiatives, which need more qualitative economic approaches. Gul and Chaudhry's view supported the use of the behavioral finance theory to guide the current study.

Background

Technology requires energy and power for economic progress and development. Sub-Saharan Africa is in the throes of constant change to inculcate greater reforms and deregulation at the institutional level of electrical suppliers and providers (Imam, Jamasb, & Llorca, 2019). However, the success of the instituted regulatory and institutional changes, including restructuring and privatization of the vertically integrated electricity

networks in sub-Saharan Africa, has been limited or questionable (Trotter, McManus, & Maconachie, 2017). The regions in sub-Saharan Africa must also contend with common challenges that plague progress, including poverty and limited economic growth, which play a part in retarding success of rural and urban electrification (Imam, Jamasb, & Llorca, 2019). The quest for sustainable energy is not restricted to sub-Saharan Africa but is a global initiative launched by the United Nations Secretary General in 2012. This initiative was intended to ensure universal access to modern energy services by 2030 (Chirambo, 2016).

Energy is essential for life and is critical for the prosperity of a nation. The absence or energy retards the ambitions of populations, stifles economic growth, and increases poverty. The lack of access to a reliable electricity supply hinders income-generating activities and constrains the provision of basic services such as health and education (Panos, Turton, Densing, & Volkart, 2016). Access to energy is vital for socioeconomic development (Trotter et al., 2017; Wesseh & Lin 2015). In sub-Saharan Africa, inadequate electricity access is considered the most important barrier to the development and prosperity of the 630 million people out of a total population of 860 million (Marwah, 2017). Prognosis is bleak unless the exploitation of wind, solar, hydro, and biomass energy is optimized; nuclear capabilities are distant and remote because of the lack of infrastructure to support the logistical, financial, and other factors involved (Ozturk & Bilgili, 2015). Development would entail a combination of the region's rich fossil and renewable resources; however, without political foresight and vision, the

region languishes behind the rest of the world regarding energy development and poverty alleviation (Panos et al., 2016).

Reforms and Energy Development

Urban and rural access to sustainable energy requires significant financial and technological investments. These investments constitute a challenge to the lagging economic progress and status of the economies in this region. The electrification rate in sub-Saharan Africa of 30.5% indicates that poor implementation of reforms may jeopardize the 2030 goal of the United Nations Secretary General (Chirambo, 2016). This literature review revealed the challenges faced from multiple perspectives. Because the region is not attractive to energy investments, with little greenhouse emission and limited potential for energy infrastructure development, progress has been stymied (Eberhard et al., 2016). Moreover, the stakeholders involved in energy development are limited, and the incentives and rebates may not be availed from national budgetary sources or international aid agencies (Eberhard et al., 2017a). The policy reforms for electrification and energy development include provisions for firms susceptible to outages to seek formal commitments with utility providers in obtaining better supply services (Oseni & Pollitt, 2015). The advantages of energy development include new opportunities to improve business growth and sustainability (Yakubu, & Jelilov, 2017). Energy development and business growth seem to be inextricably linked in sub-Saharan regions (Yakubu, & Jelilov, 2017).

Reforms are laudable when the intent is to improve economic development and increase living standards in the region. The nature of the reforms, however, must be

assessed to discern the reasons behind the implementation (Jamasb, Nepal, & Timilsina, 2017). A valid argument is that democratic reforms provide the impetus for economic growth, which may enhance economic feasibility and implementation of energy development projects (Adams, Klobodu, & Opoku, 2016). Adams et al.(2016) endorsed the correlation between democratic reforms and sustainable energy development and supported the recommendations of the International Energy Agency (IEA) report that sub-Saharan African countries must establish an effective political system and governance infrastructures to facilitate the implementation of strategic initiatives. The IEA (2014) report indicated that general governance reforms could boost the sub-Saharan African economy by 30% in 2040, which conservatively represents an extra decade's worth of growth in per capita income (Adams et al., 2016).

According to my exhaustive review of the literature, reforms entail good governance and wide-ranging changes. Moreover, reform implies restructuring the way to implement and develop energy infrastructure. Eberhard et al. (2017b) noted that Africa must contend with reforms in management stemming from the many challenges in generating and delivering electricity supply. These reforms will address issues arising from natural causes (drought), the oil price shock, system disruption by conflict, and low investment in electricity generation (Eberhard et al., 2017 b).

To solve the problem of power generation and similar problems, many countries have adopted strategies and reforms. The reforms have not delivered the expected results (Eberhard et al., 2017b). Privatization is often considered a panacea to counter a slow-moving bureaucratic machinery, but privatization has not been the answer in sub-Saharan

Africa (Estrin & Pelletier, 2018). The privatization in the electricity sector has failed in many African countries due to individual firms and households using self-generated power because of the erratic and inadequate electricity supply from the public grid (Jamasb et al., 2017). The call for reforms and the proposed solutions for effective institution and transformation seem reasonable, yet concrete initiatives in a cohesive and collaborative environment seem lacking. The government-owned machinery is a source of inefficiencies in the current delivery mechanisms, as state-owned utilities need governance reforms to reduce control and improve agility (Victor, Aziz, & Jaffar, 2015). For effective reforms, governments must cede control and facilitate greater private sector participation through a transparent regulatory environment and improved management and technical capacities (Victor et al., 2015).

In summary, prognostications of most researchers and practitioners indicated that unless a fundamental rethinking of the strategies to deliver energy is considered, the aims of energy access may be elusive. The failure to address the critical challenges faced in the energy sector in Africa drives down the economic development of the continent (Chirambo, 2016). Chirambo (2016) placed hope in the goals projected under the Sustainable Energy for All Initiative in fulfilling the universal access to modern energy services by 2030. The urgent calls for broad spectrum changes in the energy sector stakeholders and actors, and the unrelenting forces of globalization, technology, and consumer power have transformed the world to such a remarkable extent that only complacency imperils the development of the region. The pressing need to ensure

universal access to modern energy services by 2030 is realistic and attainable (Chirambo, 2016).

Uniform Code and Standardization

Sub-Saharan African countries share aspirations in terms of immediate energy access, and energy availability is likely to be instrumental in reducing poverty and elevating living standards (Yakubu & Jelilov, 2017). Nevertheless, the different countries seem to have made no concerted effort to unify and present a uniform agenda to achieve the goals of energy availability. With diverse and complex regulations, and with power generating and supplying agencies not interacting and collaborating with each other, the lack of communication may exacerbate the problem. Developing a uniform code and operating procedures may facilitate a systematic accomplishment of energy project goal attainment.

There may be lessons worthy of emulation from the efforts of the U.S. Department of Health and Human Services, the U.S. Food and Drug Administration, and other international agencies efforts to harmonize clinical research guidelines because these often diverge or conflict (Emanuel, Wood, Fleischman, & Bowen, 2014). A perusal of similar efforts may benefit energy providers in sub-Saharan Africa to design standard project management practices and principles. The key capability to ensure success may be to achieve a disposition that favors constant innovation across every facet of the energy development endeavor with the focus on unifying and standardization policies and practices. The starting point may well be in undertaking an organizational study, with the mapping of human dynamics within the process, to identify the sources and causes for

misalignments and lapses that have contributed to the failures in the past. There is potential for planning and necessity for the requisite preparatory work, which may have been hitherto neglected, considering the limited success of power and energy development in previous decades in the sub-Saharan Africa region (Trotter et al., 2017).

There are benefits in improving organizational performance through the development of appropriate laws and regulations to guide organizations in the responsible and ethical conduct of business (Nwobu et al., 2015). Concurrently with the enactment of a standard and uniform code in sub-Saharan Africa, a commitment to quality can be ingrained into a common vision and goal, to ensure electrical and other sustainable energy reaches people and businesses expeditiously (Trotter et al., 2017). The ingraining of total quality management (TQM) could serve the goals of achieving project goals, within a shortened timeline, and with quality. The concept of TQM relies on a management commitment and disposition to deliver value to all stakeholders over a long-term, in compliance with financial goals and while at the same time striving for the satisfaction of stakeholders (Chaudary, Zafar, & Salman, 2015).

Long-term success can be achieved through the involvement of the entire organization in improving processes, products, services, and the operating environment (Elbanna, Andrews, & Pollanen, 2016). There are many successful organizations, operating in less developed countries. Studying these organizations would be critical to understanding what the success factors are in these countries. The lessons from the success of such organizations can be applied to all settings and may provide perspectives on the required diligence in studying financial, project management, social and cultural

norms. The important inferences drawn and gleaned, may connote and project the key necessities in sub-Saharan Africa, including the emphasis on the energy sector behaving as responsible corporate citizens (Ndzi, 2016). This behavior could create the buy-in and commitment of consumers and investors to this noble cause. TQM must be spoken of in the same breath with the ethical and responsible conduct by non-governmental organizations (NGO's) and for-profit enterprises (Sila, 2018). Regardless of the economic and philosophical persuasions of the energy providers in sub-Saharan Africa, the words of Khan and Arsalan (2016) hold true, that all entities providing service must ensure no harmful environmental impacts with responsible policies.

Energy, the Engine of Economic Growth

The association between energy and economic growth is well known (Adams et al., 2016). Energy in the form of electrical power is essential for every facet of organizational and individual sustainment (Esso, & Keho, 2016). Esso and Keho (2016) found an inseparable relationship between energy consumption and economic growth in sub-Saharan Africa. The lack of electricity access is a key roadblock towards social and economic growth in sub-Saharan Africa; its availability and access can be helpful to alleviate poverty (Kulworawanichpong & Mwambeleko, 2015; Mentis et al., 2015). The interdependence of energy consumption and economic growth in sub-Saharan Africa justifies sustainable development policies to optimize the efficient allocation of resources. In advancing this relationship, regional policies that fail to reconcile under a broader sub-Saharan Africa framework, are likely to further delay effective solutions for the energy decadence (Adams, Klobodu, & Opoku, 2016; Trotter et al., 2017).

In the argument of double standards, however, Auriol & Blanc (2009) have presented a unique perspective on the ruling elite's corruption, in the design of public utility reforms to benefit a few. The overhaul of electrification projects in the sub-Saharan Africa may merit further and ongoing scrutiny. The complexities are varied and different, from personal and organizational inappropriate conducts to climatic changes. In respect of the latter, the exponential increase of electricity consumption in sub-Saharan Africa over the past 2 decades and the impact of changing climatic conditions cannot be underestimated (Karimu & Mensah, 2015). In the quest for greater economic growth, the harnessing of resources and the marshaling of human expertise requires data-driven and environmentally sound decision making. Schwerhoff and Sy (2017) have visualized small-scale renewable energy projects as solution for sustainable power generation towards a solution to the shortage of rural electricity supply in the sub-Saharan African region. Insofar as the challenges constraining small-scale renewable energy technology development in the region involve finance, and policy (Ahlborg & Sjöstedt, 2015; Mboumboue & Njomo, 2016).

Paying heed to environmentally secure practices is critical in a wired world; wherein errant behavior will meet some form of business isolation. The electricity generation sector needs to be compliant with environmental policies, to reduce dependence on fossil fuel (Puigjaner, Pérez-Fortes, & Laínez-Aguirre, 2015). Several studies have demonstrated a causal relationship between electricity consumption, economic growth, and CO2 emissions (Alshehry & Belloumi, 2015; Begum, Sohag, Abdullah, & Jaafar, 2015; Wang, Li, Fang, & Zhou, 2016). Hancock (2015) summarized

eloquently, stating sub-Saharan Africa faces numerous energy hurdles attributed to limited access to electricity, decaying infrastructure**,** and visualized a future for renewable energy in Africa. Commonalities in the African environment, including the sub-Saharan Africa region, have led researchers to lament the weaknesses stemming from management and infrastructure; the key drivers that escalate costs are attributed to limited transportation and energy (Christopher & Ryals, 2014).

Business Case

The focus in Africa, for the most part, has been on an important and critical urban expansion of electrical networks. The expansion into rural areas presents a multitude of logistic, political, and infrastructure challenges. With limited success observed in extending the more financially viable urban spread, to rural outreach, Munro et al. (2016) noted that this malady has remained a "pernicious challenge" and financially bereft of promise into the foreseeable future. As in any effort to increase business and economic viability, models developed using a combination of profitability and less optimistic scenarios, often create success. An innovative combination of non-profit and for-profit models of development interventions can benefit electrification in rural Africa (Munro et al., 2016). Innovation requires compelling analyses to generate optimal scenarios for prevalent conditions.

Campbell, Danilovic, Halila, and Hoveskog (2013) have advocated, in the wake of the burgeoning of the emerging economy (EE) as the principal driver of global growth, the imperative for business model innovation (BMI) in the EE is vital. The previous authors recommended that strengthening the local setting in the EE before bringing new

variables into play is critical. Business prudence also connotes, investing in recent and modern systems. In a similar vein, Forkuoh and Li (2015) observed that electricity insecurities could negatively affect the entire spectrum of productivity and labor output in manufacturing SMEs.

The drive for progress must be tempered with the adoption of technologies conducive to harnessing abundant natural resources, under diligent business analysis (Khare, Nema, & Baredar, 2016). Solar, wind, and hydro-electric constitute renewable energy sources, for which investments must be encouraged (Obama, 2017). Amankwah-Amoah (2015) has warned about using obsolete technologies in Africa and recommended technological leapfrogging to offset high up-front capital costs. The business case must also be to make it attractive for non-governmental organizations (NGOs) to invest outside the confines of small-scale, generally selectively localized distributed generation NGOs (DG-NGOs) in urban locales of certain countries (MacLean, Brass, Carley, El-Arini & Breen, 2015). In this paper, the business case analysis for the sub-Saharan Africa must include and represent the assessment of both micro and macro environments consisting of the demographic, economic, natural, technological, political/legal and social/cultural forces. The markets worldwide are in a state of change caused by consumer demand. The forces of technology, globalization, consumer power, must be integral to any business analysis, as is relevant to the sub-Saharan Africa. On the downsides of globalization, there are cases of exploitation of human labor, potential violations of human rights, and showing scant for environmental laws and policies are challenges energy suppliers (Sovacool, Heffron, McCauley, & Goldthau, 2016; Strantzali & Aravossis, 2016).

A SWOT analysis appears critical to formulating the strategy in the region. Undertaking SWOT and other similar analyses involves data collection and analysis of strengths and weaknesses and the opportunities and threats faced (Boca, 2015; Phadermrod, Crowder, & Willis, 2016). The SWOT analysis must be supplemented with a STEEP analysis, representing an examination of the social, technological, economic, environmental, and political forces in a market. There's also a PEST analysis, which involves a political, economic, social, and technological analysis. Common business knowledge indicates that organizations must monitor economics, to formulate actionable energy strategies. The success of any venture and initiative including for the energy sector in sub-Saharan Africa, requires the collection and analysis of data, the undertaking of a comprehensive due diligence and would also include consumer research, country analysis, feasibility studies. Lay et al. (2016) made the pleas for accurate and insightful analysis on individual, occupational, and workplace data, using a sample of Canadian workers. The findings indicated that it is critical for project heads to identify needed resources and accurately estimate through forecasting and planning for equipment and upgrades, as well as capital equipment and administrative costs, in ensuring project success and thereby also safeguard employees.

Attracting Energy Sector Investments

Any electricity access initiative requires substantial capital investments, thus a strategy to attract investors and investments. Chirambo (2016) has cautioned that the quest for sub-Saharan Africa to achieve universal access to modern energy services is challenging as the region does little to attract energy sector investments. Investors seek

the confirmation and confidence that there is a market for energy by households and businesses. Power purchase attracts energy sector investments, as evidenced from other geographies (Chirambo, 2016). Chirambo (2016) has however warned about a weak outlook, as the forecast for power purchases is, with feed-in tariffs, experiencing slow market growth in developing countries. The same outlook applies to sub-Saharan Africa, with constraints attributed to a range of technical, regulatory and financial barriers.

Accelerating energy access and electrification rates in developing countries, while ensuring greenhouse gas emissions to acceptable levels is a universal ideal and goal which however suffer from the availability of low-cost capital for the necessary investments (Gabriel, 2016). The solution must surely rest in providing attractive propositions for investors, and the aim of this literature review is to explore this theme more extensively, to seek possible answers. The consequence of an emphasis on seeking capital for technology, indirectly escalates costs in electricity generation, when the investments center on capital-intensive zero-emission technologies (Ekholm, Ghoddusi, Krey, & Riahi, 2013). The costs associated with compliance to given emission targets are considerably higher, as opposed to when this focus is less. The main purpose for businesses is an economic success, and that's why profits are among the key measures by which organizational performance is gauged. As determined from a review of literature presented in this discourse, those profits come by monitoring the environment, subsequent or ongoing analysis, followed by informed decision-making and prudent strategy formulation and execution.

Several views expressed in the literature have indicated, that different approaches to attract investments warrant critical and innovative thinking. Ekholm, Ghoddusi, Krey, and Riahi, (2013) have suggested either governments lead by example through increased investments, or the investment risks of the private sector should be hedged. Okafor (2015) however presented a different solution, based on the US outward foreign direct investment (FDI) into sub-Saharan Africa for 1996-2010, and indicated that key influencers include the availability of crude oil and natural gas, infrastructure development, market size and completion rates in primary education. Labor force (of those aged 15+) and inflation deter US FDI, and factors such as political instability, corruption, and the exchange rate have an insignificant negative relationship with it (Okafor, 2015). The same author concluded that potential US investors in sub-Saharan Africa hold greater value in the extent of the resources, and market factors, and the long-term development, which they could contribute to with expertise in management. Okafor also advised, that attracting US investors into sub-Saharan Africa countries requires a determined effort for open trade, corruption control, political stability, and enhanced education, training, and skills acquisition. Okafor failed to note factors such as the new US-led political climate, headed by president Donald Trump who seeks greater returns on investment (ROI), and how closely that shapes the US investment strategy in sub-Saharan Africa and other countries.

Ekholm, Ghoddusi, Krey, and Riahi, (2013) noted that climate funding arising from selling emission allowances had been globally suggested by many as a solution. They, however, advanced the compelling argument that investments in electricity

generation are a prerequisite. After that, emission efficiencies in reductions and the emission trading with the unused allowances can generate subsequent capital. The truth is that it takes money to make money and that investments in energy and electrification are essential. These investments must precede revenue generation from emission trading and savings from fuel costs could be reinvested in further development in this cycle.

The recommendation is that studying best practices in investment prudence and strategy may support informed decision making. Kim and Ncube (2014) for example, explained a strategy that is relevant in making decisions to sequentially based events. . Kim and Ncube (2014) argued that as agriculture contributes to industrial development, initial investments in this sphere may serve to fuel growth and development in the next generation, as the economic benefits derived and accrued regarding labor supply and savings, can be reinvested appropriately, across the continuum of activities in this cyclic area. Innovation strategy may need close alignment to regional dynamics because merely copying the best practices of other energy exponents in other geographic regions and nations, without adequate customization to sub-Saharan Africa diligence, research, and scrutiny may fail to deliver expected results (Amankwah-Amoah, 2015).

Attracting mega investments require a climate favorable for investors to see the potential for returns on investment (Eberhard et al., 2017a). A fundamental premise is that small businesses constitute the foundations of an economy. The recommendation based on an extensive literature review, is that sub-Saharan Africa countries must win the confidence of the small business entrepreneur, to attract investments (Okafor, 2015). These small business entities will be the greatest beneficiaries of power and stable

electricity. Wang, Wang, and Wang (2017) and others have argued, that small businesses face innumerable funding challenges. Kuada (2015) noted, that businesses in Africa continuously struggle to stay afloat, and must heavily rely on personal savings. Small business owners experience challenges securing funding; however, with better power supply, less frequent outages, this situation may change (Loutskina & Strahan, 2015). Entrepreneurs who desire progress and improved financial status may, therefore, provide financial other support to energy projects. The advantages of an extensive review of the literature are that many potential solutions emerge to perplexing and persistent problems. Mboumboue and Njomo (2016) recommended using creative strategies to draw investments and suggested that rather than seeking international investments, or from development partners and central governments, and donors funding, strategies must explore private money lending institutions such as commercial banks. The premise is that when risk-taking and innovation, are either curtailed or non-existent, an organization is essentially functioning with a shortage of strategies, resulting in limited success. Extending this discussion, the sub-Saharan Africa energy providers can potentially insulate against risks by securing funding and seeking insurance, while offering investors decent investment returns. Commercial ventures and businesses often fail to mitigate risks through the security of insurance (Njegomir & Rihter, 2015).

Renewable and Sustainable Energy

The emphasis in a changing world should be less on a sole preoccupation of pursuing just electrification. Strategists and implementers must visualize and act on harnessing energy from all possible sources. Use of efficient and innovative approaches

in distributed power generation technology may serve to supplement electricity demand fulfillment (Khare et al., 2016). A blend of sustainable and renewable energy options and capabilities in sub-Saharan Africa may pace with a changing world (Menegaki, & Tugcu, 2016). The region is endowed with an abundance of sunlight, and a more determined push for energy from the solar photovoltaic technologies in selected countries of sub-Saharan Africa may serve to meet the aspirations of energy to serve the masses (Mas'ud et al., 2016). Electricity in advanced economies is considered a fundamental necessity, and even a right.

The adoption of renewable energy (RE) can be possibly achieved by examining the best practices of other countries. The success of Grameen Shakti, a non-governmental organization in Bangladesh can be studied and emulated. The organization reportedly installed over 520,000 solar home systems, over 14,300 biogas systems, and 172,000 improved cooking stoves among 3.5 million beneficiaries in Bangladesh (Chirambo, 2016). The success translated into employment, improvements to public health, and successfully countered the political opposition and other adversities. Off-grid renewable energy technologies pose no risks associated with carbon emissions and oil (Szabó et al., 2016). The caveat is that rather than promoting individual households to purchase solar energy systems, a more concerted national policy may yield greater business and social dividends (Szabó et al., 2016). Baurzhana and Jenkinsa (2016) endorsed a similar plea, for sub-Saharan Africa to pursue vigorously rural electrification, albeit through local or national grids, instead of household-level solar PV systems. South Africa must in many respects be considered a more advanced economy compared to developing countries.

Therefore, adopting practices from South Africa must be cautiously done concerning sub-Saharan Africa. Viebahn, Vallentin, and Höller (2015) recommended that carbon capture and storage (CCS) may be a viable technological option for significantly reducing future CO2 emissions in South Africa. However, CCS goals could potentially run against important policy objectives, such as affordable electricity rates, where the dire need is to provide electricity access to the whole population.

The promise, biomass energy holds for electricity generation in sub-Saharan Africa, must also receive due consideration. Marwah (2017) explained that the total access to electricity in sub-Saharan Africa is about 26% and that percentage falls under1% in the rural areas. Marwah (2017) is congruent with the World Bank (2016), which noted that albeit an increase from 32 % to 35% between 2010 and 2012, the rate of electrification continues to be too slow to keep pace with the rapid pace of technology. One part of the solution is in the exploitation of agricultural and forest produce replacing fossil fuel to generate electricity using a gas engine, holding potential for 15% of current generation in sub-Saharan Africa (Szabó et al., 2016). The low yielding cooking and other thermal uses may belie the potential of biomass. Innovation could hold the answer to the sub-Saharan Africa region bereft of electricity, to supplement conventional energy sources (Ulsrud, Winther, Palit, & Rohracher, 2015).

Instilling Management Competencies

A business cannot thrive without management competencies, and the energy sector in sub-Saharan Africa is no exception to this rule. The problem on the surface may seem quite simple, however, is mired with greater challenges posed by political

interference, corruption, and poor administration. Adams, Klobodu, and Opoku (2016) has argued and lamented the lack of good governance and a more transparent and democratic environment, with prudent management of the economy. A better administration in the energy sector may reverse the trend of poor international investments. Adams, Klobodu, and Opoku (2016) have cited several researchers to advance the contention that low managerial skills and technical expertise in the energy sector are possibly more vitally important than the availability of energy. Management skills are critical in the drive for sufficiency and overall development of this sector. The need for better management has led Eberhard et al. (2017b) to conclude and summarize, that Africa's key challenges lie in overcoming management inadequacies of hybrid power markets, necessitating greater reform of state-owned utilities, cost-reflective pricing, and better targeting of subsidies. The underlying research of past successes and limited achievements, to roadmap a plan, could commence with an audit of current management competencies. From there, a gap analysis may help to frame creative and innovative strategies in changing management and workforce dispositions and behavior. The analysis may lead to specific actionable initiatives to frame a collaborative and synergistic performance strategy for electric power generation and equitable distribution. While combating, and improving the current poor infrastructures is a dire need and an imperative, formulating a business management strategy that is in alignment with the regional capabilities and resources can improve financial returns (Biboum & Sigue, 2014).

A critical set of analyses must be undertaken to assess current strengths and competencies, as well as deficits, lapses, and the hurdles that need to be overcome in implementing a realistic and actionable strategy that will expeditiously serve to fulfill the aim of energy universality in sub-Saharan Africa. Neighboring countries present useful models to study and adopt (Mas'ud et al., 2016). The increasingly successful adoption of the wind as an alternative power generation source in the energy mix in African countries of Morocco, Egypt, Tunisia, and South Africa, should serve as the path to follow. South Africa supplying up to 26,000 GWh annually to the national grid represent the leaders, and Cameroon and Nigeria, the laggards, despite the vast potential, depicting the absence of an explicit policy plan for wind power. In framing and executing energy initiatives customized to the characteristics of the sub-Saharan Africa, a judicious formulation of energy plans with the identification of strength and weakness, and assessment of opportunities and deficits is critical. Returns on investment over a prolonged period mandates flexibility and adaptability (Rentschler, Bleischwitz, & Flachenecker, 2018). The study of management and leadership behaviors in the energy sector are important, (Teoh et al., 2016), as is often attributed to project success, and may hold true for sub-Saharan Africa energy projects, which have stalled and languished over previous decades.

From the extensive review of literature undertaken, researchers seem to indicate that there is nothing straightforward in making decisions in the context of energy development in sub-Saharan Africa. Each country and situation will be unique and would warrant an examination of internal and marketplace factors, and across financial and

other consideration. New entrants to the energy marketplace may cause decreased demand and obsolescence for consumer products; however, the fundamental need for energy across the region must be fulfilled (Eberhard et al., 2017b; Qudrat-Ullah, 2015). Such decisions and model development and execution naturally need sub-Saharan Africa energy strategists to consider market and environmental dynamics, including new entrants, consumer choice behavior, demographic and other trends, and the influence of these factors differ from industry to industry.

Mattson, Hellgren, and Göransson (2015) posited the value of transformational leadership and communication skills, to enhance organizational performance. The question in the realm of sub-Saharan Africa projects may implicate a role for leadership and communication, as different ideologies, cultures, and beliefs of the region may require new approaches over traditional barriers and impediments. There is an explicit indication from the review of the literature, of guarded optimism in achieving the energy goals, and abject pessimism as well from the lack of an explicit plan and strategies. Adams, Klobodu, and Opoku, (2016) suggested that the energy poverty of the African continent can be overcome with comprehensive strategies of investment, improved democratic space, capacity development, and regional integration.

Social Change Implications of Sub-Saharan Africa Energy Development

The pursuit of modernization comes with a price, and electrification and sustainable energy access to populations serve in the thrust to eradicate poverty and elevate the standard of living (Karimu, & Mensah, 2015; Ozturk, & Bilgili, 2015). The avowed goal in Sub-Saharan African countries is in expeditious rural and urban

electrification, when simultaneously reducing poverty and stimulating economic growth (Dagnachew, Lucas, Hof, & van Vuuren, 2018; Dauda, 2016). Oseni and Pollitt (2015) have advocated withdrawal of subsidies and levying of tariffs to facilitate recouping costs with new grid investment while offering incentives for reliable power supply to promote private sector involvement.

The importance of the customer has been realized in all business sectors, and this also applies to the energy sector (Küfeoğlu &Lehtonen, 2015; Verleye, 2015). One of the revolutions in the world that have shaped and influenced every aspect of human endeavor has been the internet. Because of it, the customer is more informed and is the ultimate and final determinant and arbiter of organizational success. Understanding the customer is crucial, and perhaps the sub-Saharan Africa customer was previously undervalued and underestimated (Manning, Kannothra, & Wissman-Weber, 2017). Continuing to do so will imperil energy providers who fail to recognize that consumers may be financially poor (Kolawole, Adesola, & De Vita, 2017). The alleviation of poverty in the region calls for innovative approaches from energy strategists. Overcoming corruption, ethical and moral bankruptcies, and failed policies require a new commitment to social change and upliftment of the population of this region (Eberhard et al., 2017b; Kolawole et al., 2017) Traditional electricity should not be the only source of sustainable energy (Khare et al., 2016). The leaders of these countries may turn to inexhaustible sources of natural energy. Energy experts see the value off-grid solar photovoltaic (PV) systems in sub-Saharan Africa as a viable solution for rural electrification in sub-Saharan African countries (Baurzhana & Jenkinsa, 2016). The African continent receives a bountiful amount of

solar energy in comparison to the rest of the world. Baurzhana and Jenkinsa (2016) have argued in favor of the attractiveness of solar electricity generation projects in African countries, which can contribute to poverty alleviation while incurring reduced costs in harnessing it, and without any deleterious environmental impact. More than half of the population in sub-Saharan Africa countries live well below the international poverty line of $2 per day (Baurzhana & Jenkinsa, 2016). Innovation is crucial for sub-Saharan Africa. Kim and Ncube (2014) have suggested that underutilization of fertile lands may be attributed to “communal ownership of land” in rural areas, which advances the argument in favor of innovative and strategic approaches to solve this dilemma.

In the end, energy officials in the region must make urgent strategic choices grounded and steeped in data and analyses. Strategic management will necessitate formulating and evaluating cross-functional decisions that hasten the transformation towards energy sufficiency. This strategic imperative stem from its relevance to the chaotic and unpredictable environments. Eminent researchers, business thinkers, and economists tout the enormous opportunities that the African continent holds as a market for delivering future value and returns on investment. The advent of communication technologies, the internet, and mobile phones are transforming the world and transforming Africa (Tsivor, 2014). Tsivor (2014) has cautioned, that despite the boom in technology and mobile phones, the provision of reliable electricity to support the telecommunication and information technology (IT) industry represents a conundrum of trying to leverage technologies without having power infrastructure, capability, and reliability. In a region relegated to extreme backwardness the forecast is a surging

demand for electricity with current trends in population growth rate, industrialization and for telecom and information, and communications technologies (ICT) gadgets as well as the expansion in the industrialization (Tsivor, 2014).

There is an emphasis on harnessing power through renewable sources of power generation such as solar power because of the enough solar irradiation across the continent (Tsivor, 2014). The drive for alternate sources of renewable energy replacing traditional electric supply is theoretically desirable. However, the euphoria must be tempered with a focus on electric power generation as a basic form across the region as the first order of priority. The solution to overcoming these challenges may lie in evaluating the development of a prioritized agenda, setting forth the aims of positive social change, by ameliorating living standards fist with widespread electric power supply availability. Researchers Kim and Ncube (2014) have contented, citing the parallels between Asia and Africa, that among significant underlying reasons for economic stagnation in sub-Saharan Africa is the communal ownership of land in rural areas, which leads to wealth aggrandizement of a few, to the disregard and neglect of the majority. The wealth in the hands of a few leads to limited investments due to income deprivation of the majority, low agricultural yields, factors which negate industrial development (Kim & Ncube, 2014). The counter side to this argument is that a capitalistic society, as in the United States is the driver of economic growth like the innovative, industrious, and prudent individuals and businesses display the propensity to balance economic prosperity with planning and foresight.

None can deny the role of leadership in fostering innovation cannot. Leaders in the sub-Saharan Africa countries must rally those involved in energy installation projects. Achieving challenging organizational goals requires adept leadership (Chan et al., 2015). Leaders who can inspire followers, achieve success by provoking and encouraging new and innovative ways of solving complex challenges (Chan et al., 2015). The projects associated with electrification, solar energy, or other forms of sustainable energy must instill a culture of collaboration (Adil & Ko, 2016). Knowledge sharing across these countries can reap superior results, over each acting in isolation.

Organizations headed by visionary and trained leaders have the acuity and transformational skills to motivate and empower employees to share knowledge effectively so that knowledge is not restricted to only a few individuals (Jordan, Werner, & Venter, 2015). Peng et al. (2016) noted that a transformational leadership style provides employees with the inspiration, motivation, and commitment to contribute effectively to organizational missions and purpose. The findings from this literature review may connote, that a leadership audit may serve the development of energy projects in the sub-Saharan Africa region. With leadership and training, commensurate employee development may also advance the priorities and successes of energy development. The goals for alleviating poverty, with successful energy development, therefore necessitates the involvement of citizens, and professionals, ideally working together towards a common cause and with sharing of knowledge exchange seamlessly (Hung, Cooke, & Chumg, 2015). Roberts (2015) noted that a leadership style involves a focus, dedication, and commitment to goal attainment and therefore, also to meeting the

aspirations of employees, clients, customers, and the community, essential in energy availability in sub-Saharan Africa.

The success of energy projects requires innovation and transformational leadership (Aga, Noorderhaven, & Vallejo, 2016; Tabassi et al., 2016). Leaders galvanizing organizational members involve the development of a collaborative and knowledge sharing environment (Guan et al., 2015; Navimipour & Charband, 2016). The research entailed in formulating a cohesive plan in each sub-Saharan Africa country could mean examining primary and secondary data, to understand the critical success factors in expediting the energy crisis and dilemma in the region. Data analysis will involve gaining an understanding of themes and patterns produced from the research, a practice widely followed by qualitative researchers (Bedwell, McGowan, & Lavender, 2015). The region and energy project success are possibly contingent on the analysis of qualitative and quantitative data. In respect of innovation, Elmahgop et al. (2015) stressed that innovation is possible with informed decision-making, as the information is derived from the most recent and credible information in a repository of systems, which aids leaders to supplement personal experience. Investments in energy projects may need assessment, to evaluate and determine if the limited success of these endeavors have historically suffered in performance from making suboptimal decisions

It is up to strategists to utilize data and regional idiosyncrasies to sharpen energy implementation success, which has languished for far too long, as is cited in the deep review of pertinent literature undertaken for this study. The data naturally must be relevant to the challenge, insofar as new opportunities, and in addressing the pernicious

and vexing problem, of energy access to the population. Energy strategists must ensure that all utilized data are validated, interpreted and sifted through carefully. An abundance of data can cause the proverbial analysis paralysis. The takeaway from this analysis is the need for the direction and inspiration in sub-Saharan Africa. There are opportunity and place for visionaries, dreamers, innovators, and empowered followers to execute the articulate strategy with zeal, commitment, and finesse. The support of the community, the buy-in of employees, and the actions of the leadership must reflect the synergy between all entities, including followers (Giessner et al., 2015).

Deeper Business and Performance Analysis Warranted

In solving some of the complex issues businesses face in rural electrification of sub-Saharan Africa, a business analysis will be an imperative. Peters and Sievert (2016) found justification in rigorous and stringent business analysis, as energy development although marginally improved, as currently there is little progress beyond the limited achievements of the 1980s. The researchers have noted, that the claims of innovative approaches and complementary interventions need to be examined using robust studies to assess the reasons for failures. Such studies to assess the role of infrastructure in general and energy specifically on poverty and final impacts, improving connection rates and the utilization of electrical energy, and the relative and eventually combined effects are virtually nonexistent (Peters & Sievert, 2016).

Product/service differentiation can provide a competitive advantage if the focus is measured, strategic, and customer oriented (Kumar & Pansari, 2016). In examining performance, many organizations strive to achieve excellence across operations. One may

question, given the limited success of universal energy access in sub-Saharan Africa, if the business and organizational infrastructure over the years is commensurate with the aims and ambitions of electrification. Among the attributes that help in achieving performance and financial success in the real-world, is the ability to learn continuously and be adaptive to changing operational (organizational) and customer/market dynamics.

The use of advanced data analytics may advance the cause for pinpointed strategy, as the hitherto geographical areas of neglect and limited expansion warrants better informed strategic decisions to enhance the success of power grid projects. The advances in infographics facilitate graphical and visual ways to view complex data. Data must be converted into information. The information will serve to define prioritized timetable and actionable strategies that will result in a coordinated effort for electric supply. The seriousness and the structured approach will surely invite the buy-in of stakeholders and investors. The pathway to innovation requires measurement, and a combination of qualitative and quantitative methods to provide better reality check estimations of measurement. Gabriel (2016) provided the sound argument of an impending and listing crisis with the sub-Saharan Africa inability to meet advanced energy needs while ensuring emissions reductions through local renewable energy (RE) resources. The results of several researches suggested the need for a comprehensive review of RE integration for expanding access to electricity in sub-Saharan Africa, and overall, the potential for improvement in RE power generation integration and planning from a management aspect (Gabriel, 2016; Pinkse & Groot, 2015; Sen & Ganguly, 2017).

Transition

A significant percentage of the population of the sub-Saharan Africa region lacks the basic amenities of electrical power and need to be served with steady and uninterrupted energy (Dagnachew et al., 2018). The energy supplier sector is currently struggling to meet power generation for an increasing population. The countries of sub-Saharan Africa need energy to improve their economy and living conditions of its citizens. The imperatives to improve human living standards demand constant expansion, continuous improvement, and customized sector reforms in optimizing electrical grid expansions. This section included a critical review of an expansive body of literature relevant to the research topic. The aim of this section was to critically review academic and practitioner literature, to gain insight into the challenges and opportunities in improving the success of energy and power development to the region of sub-Saharan Africa. The discourse in this section included details on quality literature from recent and trustworthy sources. The discussion also included details on the conceptual framework, represented by the theory of behavioral finance, which will underpin the study.

From the detailed review of the literature, it is evident that project management prudence does not change for any organization including the energy developers and providers in sub-Saharan Africa. The review of academic and practitioner literature also served to denote the imperatives to assess the sub-Saharan Africa energy landscape and undertake qualitative and quantitative research to analyze energy needs, population trends and critical success factors. However, anomalies and atypical situations may exist, and testing strategies in small settings is vital. Being adaptive is key, and the expression

“think global, act local” applies to regional and sub-Saharan Africa settings as well. The next section will include the rationale for using a qualitative multiple case study to explore strategies that executives of power project development companies can use to conduct successful businesses ventures in sub-Saharan Africa. The section also contains a detailed description of the population and sampling, data collection instruments and techniques used in the study.

The aim in Section 2 is to present a detailed account of data collection plans and strategies and organization techniques, data analysis techniques, and the measures to ensure reliability, and validity. The final and concluding Section 3, l represents an overview of the study, commencing with an introduction, followed by the purpose statement, research question, and the study findings. The culmination of the research denoted by Section 3, also included how the study findings may be applied to professional practice, the possible implications for positive social change thereof, and ensuing formulated recommendations for action and further study. The final component of the study in Section 3, was denoted by expressing limitations, suggesting future research possibilities, the dissemination and publication of the study, a conclusion, with personal reflections based on the experience of the doctoral journey, and pertinent summaries and concluding remarks.

Section 2: The Project

This section includes an in-depth discussion of the method I used for this study on strategies that executives of power project development companies use to conduct successful businesses ventures in sub-Saharan Africa. I discuss my role as the researcher, the research design, the population and sampling, the data collection method, and the data analysis method. I also discuss the steps I followed to ensure the confidentiality, validity, and reliability of the study findings.

Purpose Statement

The purpose of this qualitative multiple case study was to explore the strategies that executives of power project development companies in sub-Saharan Africa use to operate successful businesses in sub-Saharan Africa. The sample population included four executives who had successfully developed independent power generation projects in sub-Saharan Africa in the past 5 years. I collected data through open-ended interview questions. This study may contribute to social change by enabling more successful power generation businesses in sub-Saharan Africa, and thereby provide electricity to many of the 620 million Africans who currently lack access.

Role of the Researcher

The role of qualitative researchers is to design the study, select the participants, and serve as a primary tool for collecting, organizing, and analyzing data (Collins & Cooper, 2014; Pacho, 2015). In this qualitative case study, I was the interviewer and primary data collection instrument. The data collection process involved interviewing participants in a natural setting and by Skype using a semistructured questionnaire and

collecting relevant documents for data analysis. I purposely selected the participants in person, by phone, and through e-mail.

A researcher is responsible for identifying any form of bias, which may include personal experiences and values that have the potential to influence interpretations during data collection and analysis (Marshall & Rossman, 2015). I was familiar with the research topic because I have been working in the power generation industry for the last 10 years for independent power producers, private equity firms, and development finance institutions. I was, therefore, cognizant of personal bias. Yin (2017) recommended that researchers should avoid preconceived positions that may lead to viewing data through a personal lens. I avoided viewing data through a predefined position and focused only on data I collected. I was receptive to new and conflicting evidence from the analysis of the collected data to ensure the findings reflected only the collected data. I reduced personal bias and strengthened the credibility of the study by using multiple data sources, collecting responses from executives of different companies, and performing triangulation by obtaining diverse viewpoints. I also used member checking to ensure that the information gathered was accurate and did not include my personal inferences or opinions.

Anticipating ethical considerations throughout the research process is critical to the successful completion of the study (Honig, Lampel, Siegel, & Drnevich, 2017; Le Roux, 2016). The Belmont Report (1979) presented the ethical principles and guidelines for the protection of human participants involved in research. The Belmont Report also included a distinction between research and practice, the three basic ethical principles,

and an explanation of the application of these principles. To ensure the current study complied with ethical standards required by Walden University and U.S. federal regulations, I requested and obtained the approval of the Walden University institutional review board (IRB) before proceeding to data collection. I also completed the National Institutes of Health's web-based training course on ethics and confidentiality regulations to protect participants in research.

Roulston and Shelton (2015) observed that researcher bias can change the direction or the outcome of a study. To reduce the chances of bias during my study, I used NVivo 12 to ensure unbiased data coding, an impartial word analysis, and methodical trend discovery. The use of a suitable interview protocol applied to all participants serves to optimize each interview session, increasing consistency and reliability of a study (Farrell, 2015). I applied the same interview protocol (Appendix A) to all the participants in this study.

Participants

The participants for this study were executives of companies that had developed successful power generation projects in sub-Saharan Africa in the last 5 years. This study involved four participants selected through purposive sampling. The use of purposive sampling ensures the appropriate selection of participants based on specific characteristics of population size, selection criteria, knowledge of the topic, and willingness to provide information that contributes to the research (Cleary et al., 2014; Gambari & Yusuf, 2016; Yin, 2017). Participants in this study were recruited from

acquaintances and referrals through the network of professionals and executives working in the power sector in sub-Saharan Africa.

Participants' willingness to contribute to the study depends on their connection to the study topic and their ability to collaborate fluidly with the interviewer (Kalkbrenner & Roosen, 2016; Santos, 2016). I established working relationships with participants by creating a comfortable atmosphere and trust through continued e-mail and telephone communication. I emphasized the importance of preserving participants' confidentiality and their right to withdraw at any time during the research process.

After receiving permission from Walden University's IRB to start data collection, I called potential participants and sent e-mail requests containing the participant consent form and a letter of introduction. It is important to obtain permission from participants before conducting interviews or collecting data (Castillo-Montoya, 2016; Doody & Doody, 2015). I proceeded to schedule interviews after confirming the eligibility and voluntary consent of participants.

Research Method and Design

Research Method

I explored strategies executives of power project development companies use to conduct successful business ventures in sub-Saharan Africa. A researcher must select from the following research options: qualitative, quantitative, and mixed methods (Mayoh & Onwuegbuzie, 2015). Quantitative research includes the analysis of identified variables to determine a relationship, significance, or correlation (Noble & Smith, 2015). A quantitative approach did not align with the intent of this study because there were no

known variables. A mixed-methods approach includes qualitative and quantitative data, methods, and paradigms in a study or set of related studies (Mayoh & Onwuegbuzie, 2015; McKim, 2016). Although a mixed-methods approach may yield superior results than a single method, it requires extensive research experience and creates additional time and data processing (McKim, 2016). This method did not align with the purpose of my study because there was no quantitative component in the design. The qualitative approach was used to investigate the strategies to develop successful power generation businesses in sub-Saharan Africa. The use of open-ended questions may help to address the central phenomenon (Lewis, 2015). The current study involved exploring strategies that successful companies have used. The quantitative and mixed-methods approaches were inappropriate for this study.

Research Design

I used a multiple case study design to explore strategies executives of power project development companies use to conduct successful business ventures in sub-Saharan Africa. Qualitative researchers conduct case studies to explore situations, activities, or individuals in detail by collecting qualitative data (VanScoy & Evenstad, 2015). The case study design enables researchers to learn interviewees' experiences through in-depth data collection and open-ended questions rather than through numeric data collection (VanScoy & Evenstad, 2015). Case study designs are instrumental in addressing *what* research questions (Dasgupta, 2015). Multiple case studies strengthen the results by replicating the patterns and increasing the robustness of the findings (Gammelgaard, 2017). In the current study, I explored the strategies used by four

executives, each one on a different venture, to provide a detailed description of each case, and to allow for cross-case analysis. The multiple case study design was the most appropriate to explore strategies executives of power project development companies use to conduct successful business ventures in sub-Saharan Africa.

I considered a phenomenological design for this study but determined it was not appropriate. Researchers use phenomenological designs to investigate the lived experiences of a person or group of individuals about a single phenomenon (VanScoy & Evenstad, 2015). When using a phenomenological design, the researcher focuses on understanding individuals' experience and revealing the essence of their lived experience of the phenomenon, rather than on the properties of the experience (Mayoh & Onwuegbuzie, 2015). The objective of this study was to explore strategies executives of power project development companies used to be successful in their power project development ventures. Therefore, the phenomenological design was not suitable.

Ethnographic research is another qualitative method I considered for this study; however, this method was also not appropriate. Ethnographic studies focus on people and cultures and involve observing participants in their natural habitats to gain a deeper understanding of how people experience, perceive, create, and navigate the social world (Eisenhart, 2017; Ladner, 2017). The primary purpose of ethnographic studies is understanding the patterns of values, behaviors, beliefs, and language of a culture-sharing group (Baker & Green, 2015). The ethnographic design was not appropriate for my study because I explored strategies executives used to develop successful power project development businesses and did not focus on an ethnic group or belief system.

Data saturation is the process of ensuring that an appropriate number of participants have been interviewed to provide a comprehensive review of conceivable viewpoints and to ensure sufficient data to replicate the study (Fusch & Ness, 2015; Morse, 2015). In smaller studies, researchers may achieve data saturation faster than in larger studies, and controlling the size and scope of the case study assists with data saturation (Fusch & Fusch, 2015; Noble & Smith, 2015). Palinkas et al. (2015) recommended the use of purposeful sampling to ensure the completeness of case studies. To ensure data saturation in the current study, I used purposeful sampling and member checking until no new data emerged.

Population and Sampling

The participants I selected for this study were executives of power project development companies who had a track record of conducting successful business ventures in sub-Saharan Africa and who could provide insight on strategies for successful power project development. Purposive sampling is suitable while conducting a multiple case study (Gentles, Charles, Ploeg, & McKibbon, 2015; Yin, 2017). Roy, Zvonkovic, Goldberg, Sharp, and LaRossa (2015) argued that purposive sampling methods are effective when identifying participants with specific knowledge and experiences of the phenomenon. I used purposive sampling for the multiple case study, and the selected participants had specific knowledge and experience in running successful power project development businesses in sub-Saharan Africa. The sampling strategy consisted of recruiting participants through acquaintances and referrals from a network of professionals and executives working in the power sector in sub-Saharan Africa.

Qualitative research designs tend to have a relatively small sample, and the researcher should focus on the quality of the sample rather than on a large volume of data (Guo, Lu, Wu, & Zhang, 2015). The researcher's sampling strategies must shift attention from numerical input of participants to the contribution of new knowledge from the analysis (Malterud, Siersma, & Guassora, 2016). Researchers use a sample size that aligns with the research question and the problem statement, and there is no minimum number of participants for a case study if the researcher can ensure data saturation and validation of the study results (Malterud et al., 2016; More, 2015). The sample population for this study included four executives from companies who had a track record of developing successful power project development ventures in sub-Saharan Africa within the last 5 years.

Etikan, Musa, and Alkassim (2016) suggested that strategies for purposeful sampling in qualitative research be tailored and utilized for different purposes. One of the objectives of purposeful sampling is to reach data saturation. Data saturation occurs when there is enough information to replicate the study, when the ability to obtain additional new information has been attained, and when further coding is no longer feasible (Fusch & Ness, 2015; Malterud et al., 2016). Data saturation ensures the collection of adequate and quality data to support a study (Hennink, Kaiser, & Marconi, 2016). In the current study, data saturation was achieved after interviewing four participants. Recorded interviews with participants were conducted using a Skype audio conferencing setting. The interviews took approximately 60 minutes to ensure sufficient time for participants to answer each question thoroughly.

Ethical Research

Researchers have the dual mission of generating knowledge through rigorous research while upholding ethical standards and principles (Chiumento, Rahman, Frith, Snider, & Tol, 2017; Le Roux, 2016). Ethical challenges when conducting qualitative interviews are far more complex than the researcher might anticipate, and every interview offers unexpected moments that require the researcher to be an ethical, knowledgeable, and sensitive human being (Harriss, Macsween, & Atkinson, 2017; Honig et al., 2017). Walden University's ethical standards are aligned with the three basic principles of the Belmont Report (1979), which include (a) respect of persons, (b) beneficence, and (c) justice. I informed the potential participants in the letter of introduction and the consent form of the voluntary and confidential nature of the interview and their ability to withdraw from the study at any time. The Walden University IRB approval number for this multiple case study was 11-01-18-0293542. After obtaining IRB approval for my study, I shared the consent forms with my potential participants. The consent agreement covers issues such as research subject consent to participate, purpose, procedures, risks and benefits, voluntary nature of participation in the research, and confidentiality protection procedures (Dekas & McCune, 2015). The consent agreement also included my contact information, Walden University's contact information, Walden's IRB approval number, and the statement of consent. Participants read the consent agreement carefully and gave their consent to participate in the interviews by responding with the words "I consent" to the invitation to participate in the study. I saved consent forms electronically, with the file name bearing each participant's unique identification code. I

also informed the participants that there will be no compensation or incentives for their contribution. Participants desiring to withdraw had the latitude do so any time by opting out of the study via a phone call, an email or verbally during the interview.

Upon acceptance to participate in the study and the signature of the consent form, participants received information about answering open-ended semistructured questions via an electronic communication platform such as Skype. Yin (2017) recommended the use of numeric identifiers instead of the participants' names in the data. The use of codes (PP1, PP2, PP3, and PP4) served to identify each participant and protect his confidentiality. There was no significant risk for the interviewees. Researchers must be able to protect each interviewee's privacy throughout the research process (McLaughlin & Alfaro-Velcamp, 2015). I was the only person who had access to the interview responses and the consent forms that I saved and encrypted on a personal computer. I will also keep any other study related documentation in a locked safe for 5 years following the conclusion of the multi-case study. At the end of the 5 years retention period, I will incinerate all hard copies, and erase all electronic study-related data.

Data Collection Instruments

The researcher is an effective data collection instrument (Patton, 2015). In this qualitative multiple case study, I was the primary data collection instrument. I collected data from various sources, including the World Bank, and government agencies websites and through in-depth, semistructured interviews.

Semistructured interviews help the researcher to compare data across cases in multiple case studies (Patton, 2015). Researchers conduct semistructured interviews to

gain a better understanding of participants' experience (Cridland, Jones, Caputi, & Magee, 2015). Semistructured interviews enable the researcher to ascertain subjective responses from participants regarding a phenomenon they have experienced and are suitable when there is sufficient objective knowledge about an experience or phenomenon (McIntosh & Morse, 2015). I, therefore, used a semistructured interview technique to capture successful strategies, executives of power project development companies use to conduct successful businesses in sub-Saharan Africa.

Open-ended interview questions enable participants to express themselves freely, share insights and experience, and provide detailed responses (Tran, Porcher, Falissard, & Ravaud, 2016). Open-ended interview questions also serve the purpose to ask follow-up or other resourceful questions that can be beneficial to the findings (Dempsey, Dowling, Larkin, & Murphy, 2016). These questions enable a spontaneous response and provide more in-depth information than closed-ended questions (Popping, 2015). I used open-ended questions to explore successful strategies to conduct power projects development business in sub-Saharan Africa.

The interview protocol includes the procedures that the researcher uses to guide the interview process (Yin, 2017). The use of the interview protocol may increase the reliability of case studies by ensuring all participants respond to the same line of inquiry (Castillo-Montoya, 2016; Yin, 2017). A researcher's interview protocol is an instrument of inquiry asking questions for specific information related to the aims of a study (Patton, 2015). I used an interview protocol template in Appendix A for all interviews.

To help enhance the reliability of this study, I used member checking. Member checking contributes to the reliability and validity of the data collected during the interview (Birt et al., 2016; Varpio et al., 2016). It also ensures the researcher accurately reported the participants' statements (Harvey, 2015; Varpio et al., 2016). Each participant received a copy of the interpretation of the interview session via e-mail and was able to provide comments or corrections via emails.

Data Collection Technique

The study involved the use of personal interviews with participants and the collection of documents. The use of multiple data sources enhances research scope and facilitates triangulation (Gnyawali & Song, 2016; Yazan, 2015). Each interview started with an explanation of the purpose of the study and a review of the consent form to allow any questions regarding the study. I communicated to participants that their identification and information would remain confidential and that they have the right to withdraw from the study at any time. Personal, in-depth, semistructured interviews, consisting of 10 predetermined questions, with four participants through Skype audio calls, served for this study. I transcribed the data collected through the interview as a text.

Skype is a software application and service that enables users to communicate and record voice and video over the internet, and I used it during this qualitative study. There was an electronic recording of each interview in the study through Pamela for Skype, which is a software program that facilitates easy recording of Skype audio and video calls. Interviews through Skype have the advantage to produce data as reliable and in-depth as produced during face-to-face encounters (Seitz, 2015). An advantage of

interviewing through electronic media is that it provides participants with more convenience to respond to the interview questions than face-to-face interviews (Lo Iacono, Symonds, & Brown, 2016).

Seitz (2015) argued that synchronous online interviewing is a useful supplement or replacement for face-to-face interviews and Skype offers a novel interview method to collect qualitative data. The use of the electronic interviews with open-ended questions provided an appropriate framework to capture the experiences of successful company executives, involved in power projects development businesses in sub-Saharan Africa.

The use of Skype encourages interviewees who have time and place limitations for face-to-face interviews, to participate in research and offers more convenient conditions for participants (Lo Iacono, Symonds, & Brown, 2016). There are, however, potential disadvantages to interviewing through Skype, which include logistical and technical, rapport building, and ethical issues (Seitz, 2015). I obtained informed consent from all participants, and they were fully aware of the audio recordings.

Member checking helps to ensure a study does not leave any gaps in responses (Higman & Pinfield, 2015). It also contributes to ensuring the reliability and validity of the data collected during the interview and its interpretation, thus serves to enhance and strengthen the study (Birt et al., 2016; Harvey, 2015). After the transcription of the interviews, I used member checking, which consists of each participant receiving a copy of the transcript and the interpretation for review, to ensure accuracy in the recording of response. There was a request to each interviewee to send an email and make a phone call confirming the accuracy or not of the information. Participants had the right to request to

fill out missing pieces or changes if the transcription does not reflect the original conversation accurately.

Data collection through document review complements semistructured interviews for a comprehensive case study (Yin, 2017). Triangulation helps to increase a wider and deeper understanding of the study phenomenon as well as the study accuracy (Joslin & Müller, 2016; Lodhi, 2016). I, therefore, collected secondary data and credible documents related to the study. These documents included reports and publications from multilateral agencies such as theWorld Bankand government agencies such as Power Africa and the United States Trade and Development Agency.

Data Organization Technique

After the completion of all the interviews, I transcribed of all the recorded electronic data. Each participant received a copy of the transcription to ensure accuracy. The inductive approach to the data organization phase includes open coding, creating categories, and abstraction (Ranney et al., 2016). The next step involved loading the transcriptions into NVivo 12, which is a computer-aided qualitative data analysis software (CAQDS) program. There was an identification of themes, patterns, trends, and dominant topics that emerged from the interviews. Researchers must consider how to confirm the credibility and conformability of the organization phase and ensure that the data accurately represent the information that the participants provided and that their interpretations are without biases (Ranney et al., 2016). Each participant received a copy of the transcript and the interpretation, for review, to ensure accuracy in responses' recording and processing.

A review of all collected data is critical to perform a quality analysis (Yin, 2017). A systematic review of all the study-related documents such as field notes and memos preceded the data analysis stage. An assigned code (PP1, PP2…) served to identify each participant to preserve the anonymity and confidentiality of the participants. A separate file included the contact information of the interviewees without any ties to the identity or assigned codes. Data are in a password-protected database and study related documentation stored in a locked fireproof safe. As required by Walden University, data will be inaccessible to any other person than me for 5 years after the completion of the study, and then destroyed.

Data Analysis

The case study design enables researchers to gain a deeper understanding of the perspectives of participants (Gammelgaard, 2017; Pacho, 2015). Several authors recommended the use of a methodological triangulation for case studies (Joslin & Müller, 2016; Lodhi, 2016). The data analysis for the proposed study included the use of methodological triangulation to compare raw data derived from semistructured interviews of four executives of power projects development companies, with information collected from the websites of development finance institutions and publication of U.S. government agencies. Additionally, the database contained multiple formats including raw audio recorded data, data interpretation files, member checked files, and field notes to facilitate a complex data analysis.

The use of codes and themes is critical in organizing data, concepts, and experiences to yield rich and thick descriptions and meaningful analysis of collected data

(Ranney et al., 2016). The NVivo software provides features that are instrumental in automating and analyzing data generated from selected inputs. I, therefore, used NVivo 12 to perform data coding, word analysis, and methodical trend discovery. The data analysis process logically and sequentially addresses the research question by utilizing analysis techniques designed for qualitative studies (Vaismoradi et al., 2016). Houghton et al. (2015) argued that there are no systematic rules for analyzing qualitative data. For the study, I used the thematic analysis which consists of coding the collected data, uncovering specific patterns and themes, consolidating information and driving conclusions (Clarke & Braun, 2018).

Researchers should link the chosen method, literature, and the findings of the study to the conceptual framework (Borrego, Foster, & Froyd, 2014). Data analysis takes place as a vital step in conceptually translating the data set using certain analytic approaches to convert raw data into an original and lucid depiction of the research topic (Crowe, Inder, & Porter, 2015). I allowed the collected data to guide the classification of arising topics. Each time a new information fails to fit into the initial categories, I established additional categories and reviewed previous interviews to identify the need to add additional information to the new categories. Yin (2017) suggested that a critical responsibility of researchers is to stay current on their research topic. I met that requirement by setting up alerts to receive automatic indications on new articles related to my research topic.

Interview Questions

1. What are the most significant challenges faced when developing power projects in sub-Saharan Africa?
2. What critical steps did you follow during the process of developing a power project in sub-Saharan Africa?
3. What are the critical success factors when developing power projects in sub-Saharan Africa?
4. What are the main risk factors, lenders require to be addressed before financing power projects in sub-Saharan Africa?
5. What business models have you used to successfully secure the debt financing of power projects in sub-Saharan Africa?
6. What are the barriers faced from local governments when developing power projects in sub-Saharan Africa?
7. What are the barriers to managing successful power projects in sub-Saharan Africa?
8. What are the regulatory barriers faced when developing power projects in sub-Saharan Africa?
9. What are your strategies for attracting equity investors into power projects in sub-Saharan Africa?
10. What additional information might you offer regarding successful power projects' development in sub-Saharan Africa?

Reliability and Validity

One of the critical responsibilities of a researcher is to ensure the credibility and trustworthiness of the study using appropriate measures (Houghton et al., 2013; Kornbluh, 2015). The reliability of qualitative data ensures the stability and quality of the collected data as well as guarantees the study's accuracy, transferability, dependability, and confirmability (Hadi & José Closs, 2015; Houghton et al., 2013). The concept of validity in qualitative research represents the credibility and the authenticity of the study which traduces the accuracy of the study findings from the researcher, the participants and the readers' standpoint (Hadi & José Closs, 2015).

Reliability

Reliability denotes the ability to demonstrate the uniformity and the replicability of research results, and it lies with consistency (Bengtsson, 2016; Venkatesh, Brown, & Bala, 2013). For a reliable study, 2 different researchers are expected to draw similar conclusions from the same data (Leung, 2015). Houghton et al. (2013) argued that in qualitative research, the concept of trustworthiness should replace the quantitative criteria of reliability, validity, and objectivity. Qualitative research entails the inevitable transmission of assumptions, values, interests, emotions and theories and such preconceptions influence how the researcher gather the data, interpret them and present the research results (Tufford & Newman, 2012). Therefore, Noble and Smith (2015) argued that the researcher has the critical responsibility to ensure reliability at each step of the study. According to Houghton et al. (2013), the evaluation of the reliability of qualitative research involves exploring its dependability and confirmability.

To ensure the dependability of the proposed study, my strategies included the use of a methodological triangulation, which involves the use of multiple sources to ensure the collection of comprehensive data to address the research topic and member checks. The combination of the interview data and the review of documents from credible sources served for such purpose. I emailed each interview transcription back to the participant for review to ensure I correctly interpreted the interview process and that the interpretation accurately conveys the recorded discussion. I maintained an audit trail, which consists of a thorough collection of documentation regarding all aspects of the research that facilitates conducting an orderly and organized study to ensure confirmability in this study.

Validity

In qualitative research, internal validity refers to the accuracy and soundness of research findings, descriptions, and reports (Morse, 2015). Researchers should demonstrate both ability and efforts to ensure truthfulness and certainty to the findings of studies (Hadi & José Closs, 2015; Marshall & Rossman, 2016). Houghton et al. (2013) posited that credibility is the alter ego of the quantitative criterion of internal validity as transferability is for the external validity. Similarly, Venkatesh, Brown, and Bala (2013) claimed validity in qualitative research is the degree that data are believable, consistent, and defensible. Houghton et al. (2013) presented several strategies to ensure the credibility of a study such as triangulation, prolonged engagement, and persistent observation, member check, and peer debriefing.

The first strategy I used consists of member checking. Member checking is critical for validation in qualitative research because it determines if the researcher accurately reported the participants' statements (Harvey, 2015; Varpio et al., 2016). The participants of the study received a copy of the transcription and interpretation of their respective interviews for review. After the review, they had the opportunity to request changes to any part that does not reflect their perceptions accurately.

Methodological triangulation involves using several sources on the same phenomenon to confirm data and ensure completeness to increase the credibility of findings (Jentoft & Olsen, 2017; Joslin & Müller, 2016). It was the second strategy I used to provide credibility in this qualitative research. Various secondary sources such as reports of development finance institutions such as the World Bank, and the African Development Bank, publication of U.S. government agencies such as the U.S. Trade and Development Agency, and Power Africa served for triangulation purpose. A prolonged engagement and persistent observation were my third strategy, and it yielded to data saturation. Data saturation generally occurs in several qualitative studies after a maximum of 15 interviews (Simeone, Salvini, Cohen, Alvaro, & Vellone, 2014). In a case study, data saturation occurs with a small number when participants have the most knowledge to answer the research questions (Kornbluh, 2015; Morse, 2015).

In qualitative research, external validity means transferability or applicability of the research findings to other individuals or sites of study with similar characteristics (Connelly, 2016). Houghton et al. (2013) argued the researcher should ensure the study transferability by appropriately describing the original context of the research. To

establish the external validity of the study, I purposively sampled the participants and defined the scope and boundaries of the study.

Morse (2015) referred to the strategies identified by Lincoln and Guba for ensuring validity and divided them into four primary categories: (a) credibility, which includes prolonged engagement, persistent observation, triangulation, peer debriefing, negative case analysis, referential adequacy, and member checks; (b) transferability, with robust and rich data description; (c) dependability, with triangulation and audit trail, and (d) confirmability, with triangulation and audit trail. I achieved confirmability by using triangulation and audit trail methods. I compared the data from and between the different case studies and from the various organizational documents to achieve triangulation. Researchers use audit trails to add to the trustworthiness of the study by allowing others to examine the process by which a researcher can present a faithful description to the reader (Houghton et al., 2013). I provided a foundation and explanation of my interpretation of the data and outlined the decisions made throughout the research process including the rationale for the methodological research and judgment.

Transferability refers to an ability to transfer methods or findings that are applicable to other participants or in other contexts (Connelly, 2016). Morse (2015) recommended a robust and rich data description to ensure transferability. Marshall and Rossman (2016) opined that researchers could achieve transferability by providing a detailed description of the research context. To enhance transferability, I provided a rich description of the process of data analysis, participants demographics and geographic boundaries, and research context.

Transition and Summary

In Section 2, I restated the purpose statement for the qualitative multiple case research study, which was to explore strategies that executives of power project development companies can use to conduct successful businesses ventures in sub-Saharan Africa. Besides, Section 2 contains the role and responsibility of the researcher, the justification of the selected research method and design, the data collection instruments, and participant and sampling methodologies. Furthermore, I presented in that section the strategy and tools for ensuring an ethical, reliable, and valid research study. Section 3 will include the findings and the conclusion of the study with their implications for social change and the recommendations for further studies.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative multiple case study was to explore the strategies that executives of power project development companies in sub-Saharan Africa use to operate successful businesses in sub-Saharan Africa. I collected data from four executives who had successfully developed independent power generation projects in sub-Saharan Africa in the past 5 years. All four participants responded to 10 interview questions. I transcribed and imported the collected data from semistructured interviews into NVivo 12 qualitative analysis software. After a coding and thematic analysis, I was able to identify three key themes: (a) market knowledge, (b) stakeholder alignment, and (c) commercial viability. According to the behavioral finance theory, the investment decision is not based solely on the asset pricing model, but it also accounts for cognitive and emotional factors such as risk perception especially while dealing with uncertain information (Frydman & Camerer, 2016). The themes emerging from this study may reflect a common set of characteristics and strategies for successful power project development businesses in sub-Saharan Africa. Section 3 includes a presentation of findings, application to professional practice, implications for social change, recommendations for action, recommendations for further research, reflections, and a conclusion.

Presentation of the Findings

The overarching research question was the following: What strategies do executives of power project development companies use to conduct successful business

ventures in sub-Saharan Africa? To address the above question, I conducted semistructured interviews with four executives who had successfully developed independent power generation projects in sub-Saharan Africa during in past 5 years. Researchers use purposeful sampling for the identification and selection of information-rich cases related to the phenomenon of interest (Benoot, Hannes, & Bilsen, 2016). I selected four participants out of 17 by using purposeful sampling. I contacted 17 executives, but only seven responded to my request, and four agreed to participate in the study. I was able to obtain the list of participants from acquaintances and referrals through the network of professionals and executives working in the power sector in sub-Saharan Africa.

Theme 1: Market Knowledge

Comprehensive market knowledge is essential if a business wants to provide potential customers with the best possible product or service (Ozkaya, Droge, Hult, Calantone, & Ozkaya, 2015). A thematic analysis of all four participants' answers indicated that market knowledge is critical for successful power project development in sub-Saharan Africa. The participants used terms such as "understand the need of the country," "desktop study research of the country and sector," "understand host government planning," and "understand the power sector in the country" as one of the key steps in developing a successful business.

PP1 stated that the understanding of the competition in the sector and creditworthiness of the national utility company are critical in developing successful power projects. He mentioned that a company could be successful through "a lot of

desktop study research." He also suggested that the analysis of historical records provides useful data on the ability of the customer or the sector to pay for the duration of the contract. He further opined that desktop research, speaking to consultants who have better knowledge of the market, understanding competition, and understanding the contractual agreement the developer would sign to secure the revenue line are critical.

PP2 shared the same view on confirming the creditworthiness of the state-owned utility company. He said, "I think the other really big one is the creditworthiness in most of the sub-Saharan Africa countries." He further stated that the ability to pay is not the single criterion to evaluate creditworthiness, but a company also needs to look at the availability of sufficient foreign currency reserve in the country. According to PP2, the knowledge of the country's regulatory framework is one of the most important market insights. For him, business executives need to have clarity on how supportive the country's laws are regarding securing development rights, lands, or rights to evaluate potential projects. PP2 also noted that market knowledge is critical in assessing whether the project fits the country's needs and whether the host government will support it. He suggested using internal legal resources or consultants to assess the regulatory framework. He reported having used a partnership with local business to determine whether the project fit the country's strategic plan and whether it would have the host government's long-term support.

PP3 concurred with PP2 on the importance of understanding the regulatory framework but went further by talking about understanding the applicability and suitability of the country's legislation to the challenges of the sector. PP3 gave example

of cases in which the way the country procures power projects was unclear. PP3 asked the following questions: “Is power procured through a feed-in tariff scheme, unsolicited bids, or tendering process”? “What happens if the government decides to take a project initiated by the private sector to a public tender?” Like PP4 and PP2, PP3 discussed the need to assess the creditworthiness of the state-owned utility company through the following questions: Is there someone to pay for your power? If yes, can he or she sustainably pay the bill for 20 years? PP3 agreed with the PP4 and PP2 that the land acquisition process in the country is something the developer must understand before going into further project development phases. PP3 also recommended securing a local partnership and the use of consultants to collect relevant market insights.

PP4 emphasized understanding the customer’s need as the first market information a company should collect. PP4 asked, “What does the country need: baseload, peaking power or carbon-free power?” Like the other three participants, PP4 emphasized the need to understand the country’s land regulations and land acquisition process. He stated, “Understanding land regulations is important because initiative of land is extremely sensitive.” He further said, “The first thing you have to do is to secure land in the right place.” PP4 also raised a point that other participants did not discuss: the financial position of the country and its ability to provide the required guarantees for the project. PP4 observed, “If the government is required to give guarantees or other support, is this going to distort their overall financial position?”

Sub-Saharan African utilities are often not creditworthy off-takers, and investors find themselves in different market structures with no clear correlation between the level

or sequencing of reform and private investments (Eberhard et al., 2017a). Eberhard et al. (2016) argued that the power market's characteristics, the existence of an independent regulator, the implementation of clear planning, and the procurement process are critical success factors for power projects in sub-Saharan Africa. Private investors will review some critical information to understand the country's legal and regulatory framework, the power sector policy, the general enabling environment, and the creditworthiness of the off-taker before making an investment decision (Abrams, 2016; Eberhard, Gratwick, & Kariuki, 2018). Traditional finance theories apply to markets with perfect information, no monopolies, no barriers to market entry, perfect factor mobility, zero transaction costs, and absence of externalities (Rentschler et al., 2018). The characteristics of the sub-Saharan Africa business environment described by Eberhard et al. (2017b) and the current study participants reflect an inefficient market, which indicated an alignment of the study findings with the behavioral finance theory. Table 1 shows frequency of items in Theme 1.

Table 1

Frequency of Emergent Themes: Market Knowledge

Market knowledge	*N*	% of Participants
Off-taker creditworthiness	4	100
Land acquisition process	4	100
Regulatory framework	4	100
Country needs and planning	3	75
Competition in the sector	3	75
Country financial condition	1	25

Theme 2: Stakeholder Alignment

The second theme that emerged from the data analysis was stakeholder alignment. All four participants emphasized the importance of stakeholder alignment in the success of their businesses. The participants used terms such as "a willingness of all parties to find an agreement," "is that a project they want to support all the way," "local community support," and "lenders' buy-in" to demonstrate the importance of stakeholder alignment in the success of their businesses.

PP1 noted the importance and the difficulty of managing different stakeholders' expectations. He said, "The strategy is always to get a buy-in from all stakeholders, whether it's the environment, whether it's the people, whether it's the lenders, whether it's the authorities, whether it's the landowners, whether it's the regulator and it's a difficult game." He emphasized the importance of aligning the power project

development business with the country's strategy and needs. PP1 recommended selecting projects that fit the electricity sector master plan of the country. Out of the list of several stakeholders, he pinpointed three that are critical: the host government, the local community, and the lenders. PP3 reported that understanding and meeting lenders' expectations helps to align most of the stakeholders. He insisted on the critical importance of an environmental and social impact assessment (ESIA) being done following international standards to ensure alignment of key stakeholders.

PP2 argued that the country's strategic alignment and the government's buy-in are key success factors. He suggested executives need to make sure early in the process that the project they are developing is attractive for the country and the sector. He further explained that attractiveness refers to the size of the project, the location, the technology, and the tariff. PP2's company acquired the project land following not only national regulations but also international standards. He stated, "We secured the project land following local legislation but also the World Bank standards.…As a result, we met the expectations of the host government, the local community, the equity investors, and the lenders." PP2 agreed with PP1 stating that an ESIA done by the World Bank standards would satisfy the lenders, the host government, the local community, the nongovernmental organizations (NGOs), and the equity investors.

PP3 also insisted on the alignment with the host government's strategic plan. He argued that such alignment comes from a common understanding of project risks and must start with building capacity within the government body. PP3's company strategy was to use the Africa Legal Support Facility to provide a transactional advisor to the

government. He also recommended using free transactional advisors from institutions such as Power Africa to support local governments. PP3 also noted another area where stakeholder alignment is critical: project risk sharing. He stated, “Risk should be appropriately allocated between the government, the project development company, equity investors, and lenders.”

PP4 reported that the success of a business relies on its ability to align stakeholders. He described a coal-fired power project that had developed in sub-Saharan Africa as one “of the best projects on the least cost development path for the country.” The project faced big opposition from the local community, and one of the community leaders asked him, “Would you want for you and your family to have a coal-fired power plant within 500 meters of your house?” He realized from that experience how important it is to seek local community alignment. He noted that local communities and governments often have a deep suspicion about investors’ motives. His strategy has been to build trust through constant engagement with the stakeholders. PP4 also spoke about the difficulty of reconciling competing expectations. He asked, “How do you offer an affordable tariff to the government while guaranteeing a reasonable return to equity investors and ensuring the lender for the debt repayment?” He suggested considering a combination of equity and debt of different interest rate profiles and advised against proceeding with the business in the case of high cost of capital.

Alignment seeking refers to the process of reconciling different project stakeholders’ views to enable project delivery (van der Hoorn & Whitty, 2017). The alignment of expectations among stakeholders is imperative for the success of any project

(Serra & Kunc, 2015). Power project development businesses' core activity is project management and managing stakeholders' expectations, and ensuring their alignment is critical to their success (Enevoldsen & Sovacool, 2016; Newell, Sandström, & Söderholm, 2017). Broad buy-in to the project planning process ensures that stakeholders understand the challenges and costs of developing new sources of power and creates investor interest (Eberhard et al., 2016). Applying stakeholder inclusiveness in a project increases the likelihood of more engaged and satisfied stakeholders (Eskerod, Huemann, & Ringhofer, 2015). The question of how the energy sector can develop and execute projects without compromising the life and prosperity of future generations is important. Fulfilling stakeholders' expectations of environment-friendly and socially responsible projects is necessary for a successful power project development business (Aarseth, Ahola, Aaltonen, Økland, & Andersen, 2017).

Findings from the current study were consistent with those found in the literature and secondary data sources. Stakeholder alignment includes not only a financial viability requirement from lenders and investors but also cognitive aspects such as social responsibility and sustainability with respect to the local community and the host government. Investment decisions are not based solely on financial considerations. The findings are consistent with the views of Frydman & Camerer (2016) who argued that according to the behavioral finance theory, investment decisions are not only based on financial considerations, but also on cognitive and emotional factors. Therefore, the behavioral finance theory was the most suitable framework for this study. Table 2 shows the frequency of items for Theme 2.

Table 2

Frequency of Emergent Themes: Stakeholder Alignment

Stakeholder alignment	*N*	% of Participants
Host government	4	100
Local community/ NGOs	4	100
Lenders	4	100
Equity investors	3	75

Theme 3: Commercial Viability

The third theme that emerged from the study was commercial viability. All four participants shared the view that commercial viability is a critical success factor for power project development businesses. Terms such as "return on investment," "bankable project agreements," "feasibility study," and "credit risk and guarantee" were instrumental in demonstrating the importance of the commercial viability in successful power project development businesses.

PP1 described four criteria he considered while assessing the commercial viability of the project: the results of the feasibility studies, the creditworthiness of the off-taker, the bankability of the project agreements, and the financial viability of the project. He defined a bankable project agreement to be "a legal document with sufficient collateral, future cash flow, and a high probability of success, to be acceptable to institutional lenders for financing." His strategy consisted of selecting an international consulting firm to conduct the feasibility study, using experienced law firms to draft the project

agreements and engaging with the host government to resolve the state-owned utility company creditworthiness issues. He said, “We were able to secure a sovereign guaranty to cover the termination risk and a 6 months letter of credit for the liquidity risk.” He reported that the financial return of the project was not initially good, but they were able to secure a grant from an international institution to make the business economically viable.

In addition to the commercial viability criteria PP1 described, PP2 mentioned the ability of the host government and the off-taker to provide the required project guarantees. “From the beginning, we explore strategies we should have in place for the credit enhancement of the state-owned utility or the host government,” he added. PP2’s company had a more prudent approach regarding technical feasibility. He stated, “We started by using local consultants for the pre-feasibility studies and the scoping ESIA and moved forward with international consultants upon confirming that the first studies are conclusive.” He emphasized the importance of using such strategy to reduce development costs, thus the financial loss if the project fails. PP2 faced a situation where the government was not able to provide a sovereign guarantee because of the International Monetary Fund’s restriction of the country. He advised that they used another tool called put call option agreement (PCOA) that provided lenders a similar comfort as for a sovereign guarantee. To cover for a potential liquidity default, they requested the off-taker to implement place a 6-months escrow account. He strongly recommended to plan for unforeseen delays and include their cost implication in the business plan.

Ensure the bankability of all projects agreements is the strategy outlaid by PP3. He claimed that through constant engagement with lenders and based on previous experiences on the continent, they were able to apprehend what the lender's requirements for bankable projects documents are. He then used an international law firm to draft the different agreements to reflect such requirements but also engaged with a local legal counsel to ensure alignment with local regulations. PP3's company is specialized in renewable energy projects. He insisted on the importance of the renewable energy resource's assessment. He mentioned a wind project in Kenya which despite numerous challenges, was successful because resource the wind resource was incredible. PP3 also commented on the relevance of credit enhancement mechanisms such as the partial risk guarantee (PRG), and the political risk insurance (PRI).

Like other participants, PP4 emphasized the financial return and the bankability of project documents. He said, "I have to ask myself, at that tariff, will I make enough return and is my project bankable?" He argued that there is a minimum financial return equity, investors expect and neither the lenders nor the investors will commit if the developer cannot prove the financial viability of the project. He recommended mitigating two risks that can be detrimental to the success of the commercial viability of the business: the payment default and the termination risk. His strategy consisted of using the combination of an escrow account from the off-taker and the PRG to mitigate the payment default risk. He talked about additional factors that can affect the commercial viability of projects: development costs and time. PP4 said, "if not well controlled, development costs can negatively impact the economic return of the business." He also insisted on the patience

from the developer as critical in sub-Saharan Africa and recommended considering the unpredicted delay's costs implication in the business plan.

Projects contracts should be undertaken with financially viable off-takers, whether these are national utilities or large customers (Eberhard et al., 2017). According to the same authors, previously published research on critical success factor for IPPs includes a range of country-specific factors (investment climate, power sector policies and regulation, effective planning) and project-specific factors such as well-structured and bankable projects with experienced sponsors and debt providers, robust PPAs, risk mitigation and security measures (Eberhard et al., 2016). To stimulate large-scale infrastructure development, new financial instruments such as political risk guarantees, credit insurance, partial risk guarantees are instrumental in reducing risks for investors (Ahlers, Budds, Joshi, & Zwarteveen, 2015). Responses from participants and findings from secondary data sources revealed that investment decisions of power project development businesses, encompass a significant level of risk perception that is difficult to quantify through a quantitative model, thus through the lens of the traditional finance theory. The cognitive aspects of the risk perception justify the use of the behavioral finance theory as conceptual framework. I found the findings aligned with the body of knowledge and the conceptual framework of this study. Table 3 shows frequency of items in Theme 3.

Table 3

Frequency of Emergent Themes: Commercial Viability

Commercial viability	*N*	% of Participants
Return on investment	4	100
Feasibility study	4	100
Creditworthiness of the off-taker	4	100
Bankable project agreements	4	100
Credit risk and guarantees	3	75
Development costs and time	3	75

Applications to Professional Practice

Sustainable strategies provide businesses with successful long-term profitability (Leonidou, Christodoulides, Kyrgidou, & Palihawadana, 2017). The specific business problem was some executives of power project development companies lack strategies to conduct successful businesses ventures in sub-Saharan Africa. The findings of this study identified strategies executives of power project development companies have used to operate successful businesses in sub-Saharan Africa.

Participants in this study agreed on the importance of acquiring a deep market knowledge as an initial step in the power project development business (Cesingeret al., 2016; Jin & Jung, 2016). Such knowledge includes the host government planning, the country's regularity framework, the land regulations, the off-taker creditworthiness and

the ability of the government to provide any required guarantee. Strategies include the use of local partners, consultants and desktop studies to acquire relevant market insights.

All four participants emphasized stakeholder alignment as a significant success factor. Power project development businesses' core activity is project management and managing stakeholders' expectations and ensuring their alignment is critical to their success (Enevoldsen & Sovacool, 2016; Newell, Sandström, & Söderholm, 2017). Stakeholder alignment includes ensuring bankability of project agreements, obtaining support for host government, local community and NGOs, demonstrating a strategic fit with the country and sector need and guaranteeing a reasonable financial return to the equity investor.

Finally, the four participants addressed commercial viability as another important factor for power project development companies. Profitable companies implement projects with a positive net present value (Rentschler et al., 2018). The commercial viability covers the financial viability of the business, the bankability of the project agreements, the reliability of the feasibility studies and the implementations of proper risk mitigation instruments. The participants recommended various strategies including the use of reputable technical consultants for the feasibility studies, the use of experience law firms to draft the project agreements, the implementation of the most appropriate credit enhancements tools such as the letter of credit, the escrow account, the partial risk guarantee, the political risk insurance, and the sovereign guarantee or the PCOA.

Study findings are relevant to professional practice, as this study identified practical solutions for executives of power projects development businesses. Besides, the

findings provide a practical guide for power projects development companies' executives to improve their strategies and increase the chance of success of their business. The study's findings and recommendations may contribute to the body of knowledge of emerging markets power business development by filling the gaps in ways of developing successful power generation projects. The factors included in the emerging themes may assist executives in defining strategies to conduct more successful businesses and increase profitability.

Implications for Social Change

This study integrates research to stimulate positive social change. Findings provide a guideline to power project development business on how to operate a successful business in sub-Saharan Africa. Because of lack of bankable power projects in sub-Saharan Africa, the private sector investment is limited, and the insufficient power generation capacity is among the biggest hurdles for extending grid-based electricity (Eberhard et al., 2016). As a result, more than 620 million Africans don't currently have access to electricity. Energy has become the main driver for development as industries grow, agricultural sectors become more modernized, economies boom, and countries become wealthy (Aglina, Agbejule, & Nyamuame, 2016). The lack of energy access has impacts on a wide range of development indicators, including health, education, food security, gender equality, livelihoods, and poverty reduction (The World Bank, 2018). The application of findings of this study may help increase the number of successful power projects in sub-Saharan Africa, thus, provide electricity to many of the 620 million Africans who currently lack access. The implications involve inclusive economic growth

creating productive economic opportunities for individuals, poverty alleviation, better healthcare, potable water access, and food security.

Recommendations for Action

The purpose of this qualitative multiple case study was to explore the strategies that executives of power project development companies in sub-Saharan Africa use to operate successful businesses in sub-Saharan Africa. From the findings of this study, power project development companies can take several actions to sustain and grow their business while increasing profitability. The shared perceptions revealed that executives of power project development companies should (a) seek a deep market knowledge in countries they plan to conduct business (b) ensure the alignment of stakeholders such the host government, the off-taker, the local community, lenders and equity investors (c) ensure the commercial viability of the targeted projects. The following represent the recommendations formulated from the analysis of the participants' perceptions on strategies needed to operate successful power development businesses in sub-Saharan Africa.

The first recommendation is that current and new power project development business' executives must conduct a thorough market study before starting a business in each country. In-depth market knowledge provides value in three important ways: enable the use data analysis to make well-informed decisions; ensuring objectivity by removing emotion from the decision-making process; and increase the confidence of decision makers (Ruiz & Holmlund, 2017). Firms that are focusing primarily on internal or external sources hold equal levels of knowledge about the market while firms actively

utilizing all available sources have the highest levels of market knowledge (Åkerman, 2015). Using information gathered through a combination of local partners and experienced internal consultants, they will be able to conduct business in a lean way and define proactive strategies to tackle foreseen obstacles in the market.

The second recommendation is that current or future power development companies' executives should find strategies to overcome stakeholders' misalignment. Stakeholder engagement encompasses the activities of engaging key stakeholders in communication, dialogue, and operations, with the aim of providing an informed basis for the organization's decisions as well as getting the consent of the stakeholders (Lim & Greenwood, 2017). Alignment seeking is a key activity in project managing and companies must align their accountability as perceived by key stakeholders, with their expectations (Gualandris, Klassen, Vachon, & Kalchschmidt, 2015; van der Hoorn & Whitty, 2017). Some participants in this study were able to use a local partnership to identify projects that are attractive to the government and the sector, to engage with the local community and secure their commitment. Other participants, through repeated engagement or the use of experienced consultants, were able to identify the lenders and equity investors 'expectations and define strategies to meet them. Strategies to achieve stakeholder alignment encompasses selecting a project that is attractive to the country and sector, building the host government capacity through transactional advisor support, conducting the ESIA following the World Bank standards, and ensuring proper projects risks sharing which provides comfort to equity investors.

The third recommendation that emerged from the study is the need for current or future power development companies' executives to ensure the commercial viability of their businesses. The participants recommended various strategies including the use of reputable technical consultants for the feasibility studies, the use of experience law firms to draft the project agreements, the implementation of the most appropriate credit enhancements tools such as the letter of credit, the escrow account, the partial risk guarantee, the political risk insurance, the sovereign guarantee or the PCOA. The dissemination of the research findings and recommendations might appeal to the infrastructure development association (AfIDA), the development finance institutions, supporting entities such as Power Africa, various academic and non-academic settings, power sector literature journals, and power sector conferences and seminars.

Recommendations for Further Research

This study involved gaining insight into critical success factors of power project development businesses in sub-Saharan Africa. The findings indicated critical factors that are conducive to successful businesses. This study included two main limitations: the limited size of participants (four successful executives) and the geographical constraint to go outside of countries, participants where have operated successful businesses.

The first recommendation would be to replicate this research for other emerging markets such as South Asia and Latin America. This qualitative research involved studying a smaller sample size as compared to a quantitative study, and the findings of this study cannot be generalizable. The second recommendation would be for researchers to conduct quantitative studies to examine the critical success factors for power project

development businesses which involves a larger sample and is conducive to generalizability.

Stakeholder alignment is a key topic in project management and findings revealed that it is one of the critical success factors for power project development business. My third recommendation for researchers is to explore how the leadership could effectively apply the stakeholder alignment theory to achieve profitability and sustainability in sub-Saharan Africa.

Independent power producers (IPPs) are private entities that own and operate facilities for the generation of electricity for sale to utilities. They are the next businesses to power project development companies in the electric power supply chain. My fourth recommendation is to explore the critical success factors for IPPs in sub-Saharan Africa. The last recommendation for further research suggestion is to explore strategies to secure commercial viability of power projects in sub-Saharan Africa.

Reflections

The reason for conducting this study was that having been working in the power sector for the last 10 years, I saw many power project development companies venturing into businesses; however, only a few are successful. An exploration of existing literature on power project development companies yielded very few results. I decided to conduct this research study so that the findings may provide relevant knowledge and value to aspiring and established power project development companies and bridge the gap in current literature. During my doctoral endeavor, I lost my wife to breast cancer and went through the most devastating period of my life. I must admit, I thought about dropping

out of the program but the idea she would be proud of me, and she would want me to reach the finish line, helped to hold my self together.

I was familiar with the research topic because I have been working in the power generation industry for the last 10 years, for independent power producers, private equity firms, and development finance institutions and was conscious of potential biases. I there avoided viewing data through a predefined position and focused only on data I collected. Using multiple data sources, collecting responses from executives of different companies and performing triangulation by obtaining diverse viewpoints, I reduced personal bias and strengthened the credibility of the study. I also used member checking and adhered to the interview protocol to mitigate any potential and ensure the findings did not include my inferences or opinions. Responses of the participants provided me with new insights on the critical success factors for conducting power project development business. I was surprised to discover many hidden aspects of the sector I have been for several years. For example, I have always assumed commercial viability and financial viability to be equal but realized through this study that it takes more than a good financial return to achieve commercial viability.

Summary and Study Conclusions

The purpose of this qualitative multiple case study was to explore what strategies successful power project development companies use to conduct businesses in sub-Saharan Africa. The behavioral finance theory developed by De Bondt and Thaler (1994) served to underpin this study. De Bondt and Thaler (1994) argued that investors are subject to behavioral biases in their financial decision-making process in inefficient

markets. Three main themes emerged from the research findings, which correlated with the literature review, the existing body of knowledge, and the conceptual framework of the behavioral finance theory. Perceptions gained from this study revealed that acquiring in-depth market insights, aligning stakeholders and ensuring commercial viability are critical for successful power project development businesses. The findings of this research study elucidate effective strategies, power project development companies' executives use to conduct successful businesses in sub-Saharan Africa. These strategies include developing a deep knowledge of the target market and aligning the stakeholders' expectations using a combination of local partnership and international consultants and ensuring the commercial viability of the project through bankable project agreements and the implementation of appropriate risk management and credit enhancement tools.

References

Aarseth, W., Ahola, T., Aaltonen, K., Økland, A., & Andersen, B. (2017). Project sustainability strategies: A systematic literature review. *International Journal of Project Management*, *35*(6), 1071-1083. doi:10.1016/j.ijproman.2016.11.006

Abrams, C. (2016). Rwanda–a case study in solar energy investment. *Renewable Energy Law and Policy Review*, *7*(1), 4-19. Retrieved from https://relp.lexxion.eu/article/RELP/2016/1/3

Adams, S., Klobodu, E. K. M., & Opoku, E. E. O. (2016). Energy consumption, political regime and economic growth in sub-Saharan Africa. *Energy Policy, 96*, 36-44. doi:10.1016/j.enpol.2016.05.029

Adil, A. M., & Ko, Y. (2016). Socio-technical evolution of decentralized energy systems: A critical review and implications for urban planning and policy. *Renewable and Sustainable Energy Reviews*, *57*, 1025-1037. doi:10.1016/j.rser.2015.12.079

Aglina, M. K., Agbejule, A., & Nyamuame, G. Y. (2016). Policy framework on energy access and key development indicators: ECOWAS interventions and the case of Ghana. *Energy Policy*, *97*, 332-342. doi:10.1016/j.enpol.2016.07.012

Ahlborg, H., & Sjöstedt, M. (2015). Small-scale hydropower in Africa: Socio-technical designs for renewable energy in Tanzanian villages. *Energy Research & Social Science*, *5*, 20-33. doi:10.1016/j.erss.2014.12.017

Ahlers, R., Budds, J., Joshi, D., & Zwarteveen, M. (2015). Framing hydropower as green energy: Assessing drivers, risks and tensions in the Eastern Himalayas. *Earth System Dynamics*, *6*(1), 195-204. doi:10.5194/esd-6-195-2015

Almalki, S. (2016). Integrating quantitative and qualitative data in mixed methods research–challenges and benefits. *Journal of Education and Learning*, *5*(3), 288-296. doi:10.5539/jel.v5n3p288

Alshehry, A. S., & Belloumi, M. (2015). Energy consumption, carbon dioxide emissions and economic growth: The case of Saudi Arabia. *Renewable and Sustainable Energy Reviews, 41*, 237-247. doi:10.1016/j.rser.2014.08.004

Amankwah-Amoah, J. (2015). Solar energy in Sub-Saharan Africa: The challenges and opportunities of technological leapfrogging. *Thunderbird International Business Review, 57* (1), 15-31. doi:10.1002/tie.21677

Aucamp, I., & Lombard, A. (2017). Can social impact assessment contribute to social development outcomes in an emerging economy? *Impact Assessment and Project Appraisal*, *36*(2), 173-185. doi:10.1080/14615517.2017.1390872

Auriol, E., & Blanc, A. (2009). Capture and corruption in public utilities: The cases of water and electricity in Sub-Saharan Africa. *Utilities Policy, 17*(2), 203-216. doi:10.1016/j.jup.2008.07.005

Baker, W. D., & Green, J. L. (2015). Transdisciplinary dialogues through interactional ethnographic studies: A commentary on skinner. *Mind, Culture, and Activity*, *22*(4), 364-370. doi:10.1080/10749039.2015.1084327

Balamurugan, K., Muralisachithanandam, R., & Dharmalingam, V. (2015). Performance comparison of evolutionary programming and differential evolution approaches for social welfare maximization by placement of multi type FACTS devices in pool electricity market. *International Journal of Electrical Power & Energy*

Systems, *67*, 517-528. doi:10.1016/j.ijepes.2014.12.007

Bandara, W., Furtmueller, E., Gorbacheva, E., Miskon, S., & Beekhuyzen, J. (2015). Achieving rigor in literature reviews: Insights from qualitative data analysis and tool-support. *Communications of the Association for Information Systems*, *37*, 154-204. doi:10.17705/1cais.03708

Baurzhana, S., & Jenkinsa, G. P. (2016). Off-grid solar PV: Is it an affordable or appropriate solution for rural electrification in Sub-Saharan African countries? *Renewable and Sustainable Energy Reviews, 60*, 1405-1418. doi:10.1016/j.rser.2016.03.016

Begum, R. A., Sohag, K., Abdullah, S. M. S., & Jaafar, M. (2015). CO2 emissions, energy consumption, economic and population growth in Malaysia. *Renewable and Sustainable Energy Reviews*, *41*, 594-601. doi:10.1016/j.rser.2014.07.205

Belmont Report. (1979). *The Belmont Report: Ethical principles and guidelines for the protection of human subjects of research.* Retrieved from http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, *2*, 8-14. doi:10.1016/j.npls.2016.01.001

Benoot, C., Hannes, K., & Bilsen, J. (2016). The use of purposeful sampling in a qualitative evidence synthesis: A worked example on sexual adjustment to a cancer trajectory. *BMC Medical Research Methodology*, *16*, 1-12. doi:10.1186/s12874-016-0114-6

Biboum, A., & Sigue, S. (2014). Conflict in supplier-retailer relationship in the brewery

industry in Cameroon. *Journal of African Business, 15*(2), 75-84. doi:10.1080/15228916.2014.925361

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, *26*(13), 1802-1811. doi:10.1177/1049732316654870

Boca, G.D. (2015). SWOT analyze and e-learning. *Procedia: Social and Behavioral Sciences*, *182*, 10-14. doi:10.1016/j.sbspro.2015.04.728

Boddy, C. R. (2016). Sample size for qualitative research. *Qualitative Market Research: An International Journal*, *19*(4), 426-432. doi:10.1108/qmr-06-2016-0053

Borrego, M., Foster, M. J., & Froyd, J. E. (2014). Systematic literature reviews in engineering education and other developing interdisciplinary fields. *Journal of Engineering Education*, *103*(1), 45-76. doi:10.1002/jee.20038

Bruck, M., Sandborn, P., & Goudarzi, N. (2018). A levelized cost of energy (LCOE) model for wind farms that include power purchase agreements (PPAs). *Renewable Energy*, *122*, 131-139. doi:10.1016/j.renene.2017.12.100

Campbell, D., Danilovic, M., Halila, F., & Hoveskog, M. (2013). The clash of business models in emerging economies: The case of wind energy industry in Africa. *International Journal of Management Science & Technology Information, 10*, 10-50. Retrieved from http://www.naisit.org/journal/detail/id/1

Cahyadi, A., & Prananto, A. (2015). Reflecting design thinking: A case study of the process of designing dashboards. *Journal of Systems and Information Technology*, *17*, 286-306. doi:10.1108/JSIT-03-2015-0018

Castillo-Montoya, M. (2016). Preparing for interview research: The interview protocol refinement framework. *The Qualitative Report*, *21*(5), 811-831. Retrieved from http://nsuworks.nova.edu/tqr/vol21/iss5/2

Cesinger, B., Hughes, M., Mensching, H., Bouncken, R., Fredrich, V., & Kraus, S. (2016). A socioemotional wealth perspective on how collaboration intensity, trust, and international market knowledge affect family firms' multinationality. *Journal of World Business*, *51*(4), 586-599. doi:10.1016/j.jwb.2016.02.004

Chan, P. C. A., & Ameyaw, E. E. (2015). Evaluation and ranking of risk factors in public–private partnership water supply projects in developing countries using fuzzy synthetic evaluation approach. *Expert Systems with Applications*, *42*, 5102-5116. doi:10.1016/j.eswa.2015.02.041

Chan, K.-Y., Uy, M.A., Ho, M. R., Sam, Y.L., Chernyshenko, O.S., &Yu, K-Y. (2015). Personality and entrepreneurial, professional and leadership motivations. *Personality and Individual Differences, 77*, 161-166. doi:10.1016/j.paid.2014.12.063

Chaudary, S., Zafar, S., & Salman, M. (2015). Does total quality management still shine? Re-examining the total quality management effect on financial performance. *Total Quality Management & Business Excellence, 26*(7-8), 811-824. doi:10.1080/14783363.2014.895521

Chirambo, D. (2016). Addressing the renewable energy financing gap in Africa to promote universal energy access: Integrated renewable energy financing in Malawi. *Renewable and Sustainable Energy Reviews, 62*, 793-803. doi:

10.1016/j.rser.2016.05.046

Chiumento, A., Rahman, A., Frith, L., Snider, L., & Tol, W. A. (2017). Ethical standards for mental health and psychosocial support research in emergencies: Review of literature and current debates. *Globalization and Health*, *13*(1), 1-19 doi:10.1186/s12992-017-0231-y

Christopher, M., & Ryals, L. (2014). The supply chain becomes the demand chain. *Journal of Business Logistics, 35*(1), 29-35. doi:10.1111/jbl. 12037

Clarke, V., & Braun, V. (2018). Using thematic analysis in counselling and psychotherapy research: A critical reflection. *Counselling and Psychotherapy Research*, *ISSN* 1746-1405. doi:10.1002/capr.12165

Cleary, M., Horsfall, J., & Hayter, M. (2014). Data collection and sampling in qualitative research: Does size matter? *Journal of Advanced Nursing*, *70*, 473-475. doi:10.1111/jan.12163

Collins, C. S., & Cooper, J. E. (2014). Emotional intelligence and the qualitative researcher. *International Journal of Qualitative Methods*, *13*, 88-103. doi:10.1177/160940691401300134

Connelly, L. M. (2016). Trustworthiness in qualitative research. *Medsurg Nursing*, *25*(6), 435-436. Retrieved from http://www.medsurgnursing.net

Costello, K. W., & Hemphill, R. C. (2014). Electric utilities' "death spiral": Hyperbole or reality? *The Electricity Journal*, *27*(10), 7-26. doi:10.1016/j.tej.2014.09.011

Cridland, E. K., Jones, S. C., Caputi, P., & Magee, C. A. (2015). Qualitative research with families living with autism spectrum disorder: Recommendations for

conducting semistructured interviews. *Journal of Intellectual and Developmental Disability*, *40*(1), 78-91. doi:10.3109/13668250.2014.964191

Crowe, M., Inder, M., & Porter, R. (2015). Conducting qualitative research in mental health: Thematic and content analyses. *Australian & New Zealand Journal of Psychiatry*, *49*, 616-623. doi:10.1177/0004867415582053

Dagnachew, A. G., Lucas, P. L., Hof, A. F., & van Vuuren, D. P. (2018). Trade-offs and synergies between universal electricity access and climate change mitigation in Sub-Saharan Africa. *Energy Policy*, *114*, 355-366. doi:10.1016/j.enpol.2017.12.023

Dasgupta, M. (2015). Exploring the relevance of case study research. *Vision: The Journal of Business Perspective*, *19*(2), 147-160. doi:10.1177/0972262915575661

Dauda, R. S. (2016). Poverty and economic growth in Nigeria: Issues and policies. *Journal of Poverty*, *21*(1), 61-79. doi:10.1080/10875549.2016.1141383

De Bondt, W., Mayoral, R. M., & Vallelado, E. (2013). Behavioral decision-making in finance: An overview and assessment of selected research. *Spanish Journal of Finance and Accounting, 42*(157), 99-118. doi:10.1080/02102412.2013.10779742

De Bondt, W. F., & Thaler, R. H. (1994). Financial decision-making in markets and firms: A behavioral perspective. *National Bureau of Economic Research*. doi:10.3386/w4777

Dekas, K., & McCune, E. A. (2015). Conducting ethical research with big and small data: Key questions for practitioners. *Industrial & Organizational Psychology*, *8*, 563-567. doi:10.1017/iop.2015.84

Dempsey, L., Dowling, M., Larkin, P., & Murphy, K. (2016). Sensitive interviewing in qualitative research. *Research in Nursing & Health*, *39*(6), 480-490. doi:10.1002/nur.21743

Doody, O., & Doody, C. M. (2015). Conducting a pilot study: Case study of a novice researcher. *British Journal of Nursing*, *24*(21), 1074-1078. doi:10.12968/bjon.2015.24.21.1074

Eberhard, A., Gratwick, K., & Kariuki, L. (2018). Kenya's lessons from two decades of experience with independent power producers. *Utilities Policy*, *52*, 37-49. doi: 10.1016/j.jup.2018.04.002

Eberhard, A., Gratwick, K., Morella, E., & Antmann, P. (2016). Independent power projects in sub-Saharan Africa: Lessons from five key countries. *World Bank Publications.* doi:10.1596/978-1-4648-0800-5

Eberhard, A., Gratwick, K., Morello, E., & Antmann, P. (2017a). Accelerating investments in power in sub-Saharan Africa. *Nature Energy*, *2*(2), 17005. doi:10.1038/nenergy.2017.5

Eberhard, A., Gratwick, K., Morella, E., & Antmann, P. (2017b). Independent power projects in sub-Saharan Africa: Investment trends and policy lessons. *Energy Policy*, *108*, 390-424. doi:10.1016/j.enpol.2017.05.023

Eisenhart, M. (2017). A matter of scale: multi-scale ethnographic research on education in the United States. *Ethnography and Education*, *12*(2), 134-147. doi:10.1080/17457823.2016.1257947

Ekholm, T., Ghoddusi, H., Krey, V., & Riahi, K. (2013). The effect of financial

constraints on energy-climate scenarios. *Energy Policy*, *59*, 562-572. doi: 10.1016/j.enpol.2013.04.001

Elbanna, S., Andrews, R., & Pollanen, R. (2016). Strategic planning and implementation success in public service organizations: Evidence from Canada. *Public Management Review, 18*(7), 1017-1042. doi.org/10.1080/14719037.2015.1051576

Elmahgop, F. O., Abdel Wahab, M. E., & Edrees, A. (2015). Small businesses financial and marketing constraints: Tabuk region. *Business Management Dynamics*, *4*(9), 1-18. Retrieved from http://www.bmdynamics.com

Elsaadany, A., Alaeddin, F., Badran, M., & Alsuhaibani, H. (2017). How I do it: A practical database management system to assist clinical research teams with data collection, organization, and reporting. *The Arab Journal of Interventional Radiology*, *1*(1), 10-14. doi:10.4103/2542-7075.199567

Emanuel, E., Wood, A., Fleischman, A., & Bowen, A. (2014). Oversight of human participants research: Identifying problems to evaluate reform proposals. *Annals of Internal Medicine*, *141*(4), 282-291. Retrieved from http://annals.org/aim

Enevoldsen, P., & Sovacool, B. K. (2016). Examining the social acceptance of wind energy: Practical guidelines for onshore wind project development in France. *Renewable and Sustainable Energy Reviews*, *53*, 178-184. doi:10.1016/j.rser.2015.08.041

Eskerod, P., Huemann, M., & Ringhofer, C. (2015). Stakeholder inclusiveness: Enriching project management with general stakeholder theory. *Project Management Journal*, *46*(6), 42-53. doi:10.1002/pmj.21546

Esso, L. J., & Keho, Y. (2016). Energy consumption, economic growth and carbon emissions: Cointegration and causality evidence from selected African countries. *Energy*, *114*, 492-497. doi:10.1016/j.energy.2016.08.010

Estrin, S., & Pelletier, A. (2018). Privatization in developing countries: What are the lessons of recent experience? *The World Bank Research Observer*, *33*(1), 65-102. doi:10.1093/wbro/lkx007

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, *5*(1), 1-4. doi:10.11648/j.ajtas.20160501.11

Farrell, B. (2015). Using interviews to improve relationships with library partners: A case study. *Reference Services Review*, *43*, 251-261. doi:10.1108/RSR-01-2015-0001

Forkuoh, S. K., & Li, Y. (2015). Electricity power insecurity and SMEs growth: a case study of the cold store operators in the Asafo market area of the Kumasi metro in Ghana. *Open Journal of Business and Management*, *3*(3), 312-325. doi:10.4236/ojbm.2015.33031

Frydman, C., & Camerer, C. F. (2016). The psychology and neuroscience of financial decision making. *Trends in cognitive sciences*, *20*(9), 661-675. doi:10.1016/j.tics.2016.07.003

Furuoka, F. (2017). Renewable electricity consumption and economic development: New findings from the Baltic countries. *Renewable and Sustainable Energy Reviews*, *71*, 450-463. doi:10.1016/j.rser.2016.12.074

Fusch, P. I., & Fusch, G. E. (2015). Leadership and conflict resolution on the production

line. *International Journal of Applied Management and Technology*, *14*(1), 21-39. doi:10.5590/IJAMT.2015.14.1.02

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*(9), 1408-1416. Retrieved from http://nsuworks.nova.edu/tqr/vol20/iss9/3

Gabriel, C., A. (2016). What is challenging renewable energy entrepreneurs in developing countries? *Renewable and Sustainable Energy Reviews*, *64*, 362-371. doi:10.1016/j.rser.2016.06.025

Gambari, I. A., & Yusuf, M. O. (2016). Effects of computer-assisted Jigsaw II cooperative learning strategy on physics achievement and retention. *Contemporary Educational Technology*, *7*, 352-367. doi:0.21061/jcte.v13i2.671

Gammelgaard, B. (2017). The qualitative case study. *The International Journal of Logistics Management*, *28*(4), 910-913. doi:10.1108/IJLM-09-2017-0231

Gaya, H. J., & Smith, E. E. (2016). Developing a qualitative single case study in the strategic management realm: An appropriate research design. *International Journal of Business Management and Economic Research*, *7*(2), 529-538. Retrieved from www.ijbmer.com

Gentles, S. J., Charles, C., Ploeg, J., & McKibbon, K. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The Qualitative Report*, *20*(11), 1772-1789. Retrieved from http://nsuworks.nova.edu/tqr/

Giessner, S. R., Van Quaquebeke, N., van Gils, S., van Knippenberg, D., & Kollée, J. A. (2015). In the moral eye of the beholder: the interactive effects of leader and

follower moral identity on perceptions of ethical leadership and LMX quality. *Frontiers in Psychology, 6*, 1126. doi:10.3389/fpsyg.2015.01126

Gnyawali, D. R., & Song, Y. (2016). Pursuit of rigor in research: Illustration from coopetition literature. *Industrial Marketing Management*, *57*, 12-22. doi:10.1016/j.indmarman.2016.05.004

Gualandris, J., Klassen, R. D., Vachon, S., & Kalchschmidt, M. (2015). Sustainable evaluation and verification in supply chains: Aligning and leveraging accountability to stakeholders. *Journal of Operations Management*, *38*, 1-13. doi:10.1016/j.jom.2015.06.002

Guan, Z., Yang, S., Sun, H., Srivatsa, M., & Yan, X. (2015). Fine-grained knowledge sharing in collaborative environments. *IEEE transactions on Knowledge and data Engineering*, *27*(8), 2163-2174. doi:10.1109/TKDE.2015.2411283

Gul, E. & Chaudhry, I. S. (2014). Qualitative assessment of energy initiative: Case study from Liberia. *International Journal of Energy Economics and Policy, 4*(3), 2014, 360-372. doi: 13399/33030(99)63

Guo, W., Lu, D., Wu, Y., & Zhang, J. (2015). Mapping impervious surface distribution with integration of SNNP VIIRS-DNB and MODIS NDVI data. *Remote Sensing*, *7*, 12459-12477. doi:10.3390/rs70912459

Hadi, M. A., & José Closs, S. (2015). Ensuring rigour and trustworthiness of qualitative research in clinical pharmacy. *International Journal of Clinical Pharmacy*, *38*(3), 641-646 doi:10.1007/s11096-015-0237-6

Hancock, K.J. (2015). The expanding horizon of renewable energy in sub-Saharan

Africa: Leading research in the social sciences. *Energy Research & Social Science,5*, 1-8. doi: 10.1016/j.erss.2014.12.021

Harriss, D., Macsween, A., & Atkinson, G. (2017). Standards for ethics in sport and exercise rcience Research: 2018 update. *International Journal of Sports Medicine*, *38*(14), 1126-1131. doi:10.1055/s-0043-124001

Harvey, L. (2015). Beyond member-checking: A dialogic approach to the research interview. *International Journal of Research and Method in Education*, *38*, 23-38. doi:10.1080/1743727X.2014.914487

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2016). Code saturation versus meaning saturation. *Qualitative Health Research*, *27*(4), 591-608. doi:10.1177/1049732316665344

Higman, R., & Pinfield, S. (2015). Research data management and openness: The role of data sharing in developing institutional policies and practices. *Program: Electronic Library and Information Systems*, *49*, 364-381. doi:10.1108/PROG-01-2015-0005

Hirshleifer, D. (2015). Behavioral finance. *Annual Review of Financial Economics*, *7*(1), 133-159. doi:10.1146/annurev-financial-092214-043752

Honig, B., Lampel, J., Siegel, D., & Drnevich, P. (2017). Special section on ethics in management research: Norms, identity, and community in the 21st century. *Academy of Management Learning and Education*, *16*(1), 84-93. doi:10.5465/amle.2017.0023

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-

study research. *Nurse Researcher*, *20*(4), 12-17. doi:10.7748/nr2013.03.20.4.12.e326

Houghton, C., Murphy, K., Shaw, D., & Casey, D. (2015). Qualitative case study data analysis: An example from practice. *Nurse Researcher*, *22*(5), 8-12. doi:10.7748/nr.22.5.8.e1307

Hung, I., Fry, J., Cooke, L., & Chumg. H. (2015). Factors affecting knowledge sharing in the virtual organization: Employees' sense of well-being as a mediating effect. *Computers in Human Behavior*, *44*, 70-80. doi:10.1016/j.chb.2014.11.040

International Energy Agency (IEA, 2014). Annual Report. Retrieved from https://www.iea.org/publications/freepublications/publication/2014_IEA_AnnualReport.pdf

International Renewable Energy Agency (IRENA, 2015). Africa 2030: Roadmap for a renewable energy future. Retrieved from https://www.irena.org/publications/2015/Oct/Africa-2030-Roadmap-for-a-Renewable-Energy-Future

Iossa, E., & Martimort, D. (2015). The simple microeconomics of Public-Private Partnerships. *Journal of Public Economic Theory*, *17*(1), 4-48. doi:10.1111/jpet.12114

Isik, C., Dogru, T., & Turk, E. S. (2017). A nexus of linear and non-linear relationships between tourism demand, renewable energy consumption, and economic growth: Theory and evidence. *International Journal of Tourism Research*, *20*(1), 38-49. doi:10.1002/jtr.2151

Jamasb, T., Nepal, R., & Timilsina, G. R. (2017). A quarter century effort yet to come of age: A survey of electricity sector reform in developing countries. *The Energy Journal*, *38*(3), 195-234. doi:10.5547/01956574.38.3.tjam

Jentoft, N., & Olsen, T. S. (2017). Against the flow in data collection: How data triangulation combined with a "slow" interview technique enriches data. *Qualitative Social Work: Research and Practice*, 147332501771258. doi:10.1177/1473325017712581

Jin, B., & Jung, S. (2016). Toward a deeper understanding of the roles of personal and business networks and market knowledge in SMEs' international performance. *Journal of Small Business and Enterprise Development*, *23*(3), 812-830. doi:10.1108/JSBED-08-2015-0104

Jordan, P. J., Werner, A., & Venter, D. (2015). Achieving excellence in private intensive care units: The effect of transformational leadership and organisational culture on organisational change outcomes. *SA Journal of Human Resource Management*, *13*(1) 1-10. doi:10.4102/sajhrm.v13i1.707

Joslin, R., & Müller, R. (2016). Identifying interesting project phenomena using philosophical and methodological triangulation. *International Journal of Project Management*, *34*(6), 1043-1056. doi:10.1016/j.ijproman.2016.05.005

Kalkbrenner, B. J., & Roosen, J. (2016). Citizens' willingness to participate in local renewable energy projects: The role of community and trust in Germany. *Energy Research & Social Science*, *13*, 60-70. doi:10.1016/j.erss.2015.12.006

Karimu, A., & Mensah, J. T. (2015). Climate change and electricity consumption in Sub-

Saharan Africa: Assessing the dynamic responses to climate variability. *OPEC Energy Review*, *39*(3), 322–345. doi:10.1111/opec.12054

Khan, J., & Arsalan, M. H. (2016). Solar power technologies for sustainable electricity generation – A review. *Renewable and Sustainable Energy Reviews*, *55*, 414-425. doi:10.1016/j.rser.2015.10.135

Khare, V., Nema, S., & Baredar, P. (2016). Solar–wind hybrid renewable energy system: A review. *Renewable and Sustainable Energy Reviews*, *58*, 23-33. doi:10.1016/j.rser.2015.12.223

Kim, H.-S. & Ncube, M. (2014). Agricultural sector development and structural transformation: Sub-Saharan Africa versus East Asia. *Seoul Journal of Economics*, *27*(3), 349–386. Retrieved from www.sje.ac.kr/

Kolawole, A., Adesola, S., & De Vita, G. (2017). A disaggregated analysis of energy demand in sub-Saharan Africa. *International Journal of Energy Economics and Policy*, *7*(2), 224-235. Retrieved from http://econjournals.com/index.php/ijeep/article/view/4324

Kornbluh, M. (2015). Combatting challenges to establishing trustworthiness in qualitative research. *Qualitative Research in Psychology*, *12*(4), 397-414. doi:10.1080/14780887.2015.1021941

Kuada, J. (2015). Entrepreneurship in Africa – a classificatory framework and a research agenda. *African Journal of Economic and Management Studies*, *6*(2), 148-163. doi:10.1108/ajems-10-2014-0076

Küfeoğlu, S. & Lehtonen, M. (2015). Interruption costs of service sector electricity

customers, a hybrid approach. *International Journal of Electrical Power & Energy Systems*, *64*, 588-595. doi:10.1016/j.ijepes.2014.07.046

Kulworawanichpong, T. & Mwambeleko, J. (2015). Design and costing of a stand-alone solar photovoltaic system for a Tanzanian rural household. *Sustainable Energy Technologies and Assessments, 12*, 53-59. doi:10.1016/j.seta.2015.10.001

Kumar, V., & Pansari, A. (2016). Competitive advantage through engagement. *Journal of Marketing Research*, *53*(4), 497-514. doi:10.1509/jmr.15.0044

Ladner, S. (2017). Ethnographic research design. *Ethnographic Praxis in industry Conference Proceedings*, *2017*(1), 500. doi:10.1111/1559-8918.2017.01188

Lay, A. M., Saunders, R., Lifshen, M., Breslin, C., LaMontagne, A., Tompa, E., & Smith, P. (2015). Individual, occupational, and workplace correlates of occupational health and safety vulnerability in a sample of Canadian workers. *American Journal of Industrial Medicine*, *59*(2), 119-128. doi:10.1002/ajim.22535

Lee, H., Chapiro, J., Schernthaner, R., Duran, R., Wang, Z., Gorodetski, B., ... & Lin, M. (2015). How I do it: a practical database management system to assist clinical research teams with data collection, organization, and reporting. *Journal of Vascular and Interventional Radiology, 26*(2), S130. doi:10.1016/j.jvir.2014.12.349

Lenz, L., Munyehirwe, A., Peters, J., & Sievert, M. (2017). Does large-scale infrastructure investment alleviate poverty? Impacts of Rwanda's electricity access roll-out program. *World Development*, *89*, 88-110. doi:10.1016/j.worlddev.2016.08.003

Leonidou, L., Christodoulides, P., Kyrgidou, L., & Palihawadana, D. (2017). Internal drivers and performance consequences of small firm green business strategy: The moderating role of external forces. *Journal of Business Ethics*, *140*, 585-606. doi:10.1007/s10551- 015-2670-9

Le Roux, C. S. (2016). Exploring rigour in autoethnographic research. *International Journal of Social Research Methodology*, *20*(2), 195-207. doi:10.1080/13645579.2016.1140965

Leung, L. (2015). Validity, reliability, and generalizability in qualitative research. *Journal of Family Medicine and Primary Care*, *4*(3), 324-327. doi:10.4103/2249-4863.161306

Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health Promotion Practice*, *16*(4), 473-475. doi:10.1177/1524839915580941

Lim, J. S., & Greenwood, C. A. (2017). Communicating corporate social responsibility (CSR): Stakeholder responsiveness and engagement strategy to achieve CSR goals. *Public Relations Review*, *43*(4), 768-776. doi:10.1016/j.pubrev.2017.06.007

Lim, T. S., Mail, R., Karim, M. R. A., Ulum, Z. K. A. B., Jaidi, J., & Noordin, R. (2018). A serial mediation model of financial knowledge on the intention to invest: The central role of risk perception and attitude. *Journal of Behavioral and Experimental Finance*, *20*, 74-79. doi:10.1016/j.jbef.2018.08.001

Lo Iacono, V. L., Symonds, P., & Brown, D. H. K. (2016). Skype as a tool for qualitative research interviews. *Sociological Research Online*, *21*(2), 1-15.

doi:10.5153/sro.3952

Lodhi, M. F. K. (2016). Quality issues in higher education: The role of methodological triangulation in enhancing the quality of a doctoral thesis. *Journal of Research in Social Sciences*, *4*(1), 62-74. Retrieved from https://www.numl.edu.pk/jrss-index.html

Lyle, J. (2018). Reflecting on the development of a conceptual framework for sport coaching. *International Sport Coaching Journal*, *5*(1), 90-98. doi:10.1123/iscj.2017-0085

MacLean, L., Brass, J., Carley, S., El-Arini, A., & Breen, S. (2015). Democracy and the distribution of NGOs promoting renewable energy in Africa. *The Journal of Development Studies*. *51*(6), 725-742. doi:10.1080/00220388.2014.989994

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies. *Qualitative Health Research*, *26*(13), 1753-1760. doi:10.1177/1049732315617444

Manning, S., Kannothra, C. G., & Wissman-Weber, N. K. (2017). The strategic potential of community-based hybrid models: The case of global business services in Africa. *Global Strategy Journal*, *7*(1), 125-149. doi:10.1002/gsj.1147

Marshall, C., & Rossman, G. B. (2015). *Designing qualitative research* (6th ed.). Thousand Oaks, CA: Sage.

Marwah, H. (2017). Electricity Access Inequality in Sub-Saharan Africa, 1950-2000. *African Economic History*, *45*(2), 113-144. doi:10.1353/aeh.2017.0008

Mas'ud, A. A., Wirba, A.V., Muhammad-Sukki, F., Albarracín, R., Abu-Bakar, S.H.,

Munir, A.B., & Bani, N.A. (2016). A review on the recent progress made on solar photovoltaic in selected countries of sub-Saharan Africa. *Renewable and Sustainable Energy Reviews,62*, 441-452. doi: 10.1016/j.rser.2016.04.055

Mattson, M., Hellgren, J., & Göransson, S. (2015). Leader communication approaches and patient safety: An integrated model. *Journal of Safety Research*, *53*, 53-62. doi:10.1016/j.jsr.2015.03.008

Mayoh, J., & Onwuegbuzie, A. J. (2015). Toward a conceptualization of mixed methods phenomenological research. *Journal of Mixed Methods Research*, *9*, 91-107. doi:10.1177/1558689813505358

Mboumboue, E., & Njomo, D. (2016). Potential contribution of renewables to the improvement of living conditions of poor rural households in developing countries: Cameroon′s case study. *Renewable and Sustainable Energy Reviews*, *61*, 266-279. doi:10.1016/j.rser.2016.04.003

McIntosh, M. J., & Morse, J. M. (2015). Situating and constructing diversity in semi-structured interviews. *Global qualitative nursing research*, *2*, 2333393615597674. doi:10.1177/2333393615597674

McKim, C. A. (2016). The value of mixed methods research. *Journal of Mixed Methods Research, 11*(2), 202-222. doi:10.1177/1558689815607096

McLaughlin, R. H., & Alfaro-Velcamp, T. (2015). The vulnerability of immigrants in research: Enhancing protocol development and ethics review. *Journal of Academic Ethics*, *3*, 27-43. doi:10.1007/s10805-015-9225-7

Menegaki, A. N., & Tugcu, C. T. (2016). Rethinking the energy-growth nexus: Proposing an index of sustainable economic welfare for Sub-Saharan Africa. *Energy Research & Social Science*, *17*, 147-159. doi:10.1016/j.erss.2016.04.009

Mentis, D., Welsch, M., Fuso Nerini, F., Broad, O., Howells, M., Bazilian, M., & Rogner, H. (2015). A GIS-based approach for electrification planning–A case study on Nigeria. *Energy for Sustainable Development*, *29*, 142-150. doi:10.1016/j.esd.2015.09.007

Moosa, I. A., & Ramiah, V. (2017). The rise and rise of behavioural finance. *The Financial Consequences of Behavioural Biases*, 27-44. doi:10.1007/978-3-319-69389-7_2

Morse, J. M. (2015). Data were saturated...*Qualitative Health Research*, *25*(5), 587-588. doi:10.1177/1049732315576699

Munro, P., van der Horst, G., Willans, S., Kemeny, P., Christiansen, A., & Schiavone, N. (2016). Social enterprise development and renewable energy dissemination in Africa: The experience of the community charging station model in Sierra Leone. *Progress in Development Studies, 16*(1) 24-38. doi:10.1177/1464993415608080

Navimipour, N. J., & Charband, Y. (2016). Knowledge sharing mechanisms and techniques in project teams: Literature review, classification, and current trends. *Computers in Human Behavior*, *62*, 730-742. doi:10.1016/j.chb.2016.05.003

Nawrocki, D., & Viole, F. (2014). Behavioral finance in financial market theory, utility theory,portfolio theory and the necessary statistics: A review. *Journal of Behavioral and Experimental Finance, 2*, 10-17. doi:10.1016/j.jbef.2014.02.005

Ndzi, E. (2016). Corporate social responsibility in Cameroon: The hydro electricity sector. *African Journal of Business Management*, *10*(7), 151-161. doi:10.5897/ajbm2015.7993

Newell, D., Sandström, A., & Söderholm, P. (2017). Network management and renewable energy development: an analytical framework with empirical illustrations. *Energy research & social science*, *23*, 199-210. doi:10.1016/j.erss.2016.09.005

Ngai, E. W., Tao, S. S., & Moon, K. K. (2015). Social media research: Theories, constructs, and conceptual frameworks. *International Journal of Information Management*, *35*(1), 33-44. doi.org/10.1016/j.ijinfomgt.2014.09.004

Njegomir, V., & Rihter, J. D. (2015). The role and importance of insurance of business and supply chain interruptions. *Management (1820-0222)*, (77), 53-60. doi: 7595/management.fon.2015.0025

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, *18*(2), 34-35. doi:10.1136/eb-2015-102054

Nwobu, O., Faboyede, S. O., & Onwuelingo, A. T. (2015). The role of accounting services in small and medium scale businesses in Nigeria. *Journal of Accounting-Business & Management, 22*(1), 55-63. Retrieved from http://jabm.stie-mce.ac.id/?page=international

Obama, B. (2017). The irreversible momentum of clean energy. *Science*, *355*(6321), 126-129. doi: 10.1126/science.aam6284

Okafor, G. (2015). Locational determinants of US outward FDI into Sub-Saharan Africa.

The Journal of Developing Areas, 49(1), 185-205. Retrieved from https://www.jstor.org/journal/jdevearea

Oseni, M.O. & Pollitt, M.G. (2015). A firm-level analysis of outage loss differentials and self-generation: Evidence from African business enterprises. *Energy Economics, 52*, 277-286. doi: 10.1016/j.eneco.2015.11.008

O'Reilly, M., & Parker, N. (2012). Unsatisfactory saturation: A critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research Journal, 13*(2), 190-197. doi:10.1177/1468794112446106

Ouedraogo, N. S. (2017). Africa energy future: Alternative scenarios and their implications for sustainable development strategies. *Energy Policy*, *106*, 457-471. doi:10.1016/j.enpol.2017.03.021

Ozkaya, H. E., Droge, C., Hult, G. T. M., Calantone, R., & Ozkaya, E. (2015). Market orientation, knowledge competence, and innovation. *International Journal of Research in Marketing*, *32*(3), 309-318. doi:10.1016/j.ijresmar.2014.10.004

Ozturk, I., & Bilgili, F. (2015). Economic growth and biomass consumption nexus: Dynamic panel analysis for Sub-Sahara African countries. *Applied Energy*, *137*, 110-116. doi:10.1016/j.apenergy.2014.10.017

Pacho, T. O. (2015). Exploring participants' experiences using case study. I*nternational Journal of Humanities and Social Science*, *5*(4), 44-53. Retrieved from http://www.ijhssnet.com

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed

method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(5), 533-544. doi:10.1007/s10488-013-0528-y

Panos, E., Turton, H., Densing, M, & Volkart, K. (2016). Powering the growth of sub-Saharan Africa: The jazz and symphony scenarios of World Energy Council. *Energy for Sustainable Development, 26*,14-33. doi:10.1016/j.esd.2015.01.004

Paré, G., Trudel, M. C., Jaana, M., & Kitsiou, S. (2015). Synthesizing information systems knowledge: A typology of literature reviews. *Information & Management*, *52*(2), 183-199. doi:10.1016/j.im.2014.08.008

Pauw, W. P. (2015). Not a panacea: private-sector engagement in adaptation and adaptation finance in developing countries. *Climate Policy*, *15*(5), 583-603. doi:10.1080/14693062.2014.953906

Peinhardt, C., & Allee, T. (2016). Political risk insurance as dispute resolution. *Journal of International Dispute Settlement*, *7*(1), 205-224. doi:10.1093/jnlids/idv034

Peters, J., & Sievert, M. (2016). Impacts of rural electrification revisited–the African context. *Journal of Development Effectiveness*, *8*(3), 327-345. doi:10.1080/19439342.2016.1178320

Phadermrod, B., Crowder, R., & Willis, G. (2016). Importance-Performance Analysis based SWOT analysis. *International Journal of Information Management*, doi: 10.1016/j.ijinfomgt.2016.03.009

Pinkse, J., & Groot, K. (2015). Sustainable entrepreneurship and corporate political activity: Overcoming market barriers in the clean energy sector. *Entrepreneurship*

Theory and Practice, 39(3), 633-654. doi:10.1111/etap.12055

Popping, R. (2015). Analyzing open-ended questions by means of text analysis procedures. *Bulletin of Sociological Methodology*, *128*(1), 23-39. doi:10.1177/0759106315597389

Puigjaner, L., Pérez-Fortes, M. & Laínez-Aguirre, J. (2015). Towards a carbon-neutral energy sector: Opportunities and challenges of coordinated bioenergy supply chains–A PSE approach. *Energies*, *8*, 5613-5660; doi:10.3390/en8065613

Peng, A. C., Lin, H. E., Schaubroeck, J., McDonough, E. F., Hu, B., & Zhang, A. (2016). CEO intellectual stimulation and employee work meaningfulness: The moderating role of organizational context. *Group & Organization Management, 41,* 203-231. doi:10.1177/1059601115592982

Qudrat-Ullah, H. (2015). Independent power (or pollution) producers? Electricity reforms and IPPs in Pakistan. *Energy*, *83*, 240-251. doi:10.1016/j.energy.2015.02.018

Ramiah, V., Xu, X., Moosa, I.A. (2015). Neoclassical finance, behavioral finance and noise traders: A review and assessment of the literature. *International Review of Financial Analysis*, *41*, 89-100. doi:10.1016/j.irfa

Ranney, M. L., Meisel, Z. F., Choo, E. K., Garro, A. C., Sasson, C., & Morrow Guthrie, K. (2015). Interview-based qualitative research in emergency care part II: Data collection, analysis and results reporting. *Academic Emergency Medicine*, *22*(9), 1103-1112. doi:10.1111/acem.12735

Rentschler, J., Bleischwitz, R., & Flachenecker, F. (2018). On imperfect competition and market distortions: the causes of corporate under-investment in energy and

material efficiency. *International Economics and Economic Policy*, *15*(1), 159-183. doi:10.1007/s1036

Roberts, G. E. (2015). Reflections on servant leader character: Moving into the future. *Developing Christian Servant Leadership* (pp. 223-226). Palgrave Macmillan US. doi:10.1057/9781137492456_17

Rohankar, N., Jain, A. K., Nangia, O. P., & Dwivedi, P. (2016). A study of existing solar power policy framework in India for viability of the solar projects perspective. *Renewable and Sustainable Energy Reviews*, *56*, 510-518. doi:10.1016/j.rser.2015.11.062

Roulston, K., & Shelton, S. A. (2015). Reconceptualizing bias in teaching qualitative research methods. *Qualitative Inquiry*, *21*(4), 332-342. doi:10.1177/1077800414563803

Roy, K., Zvonkovic, A., Goldberg, A., Sharp, E., & LaRossa, R. (2015). Sampling richness and qualitative integrity: Challenges for research with families. *Journal of Marriage and Family*, *77*, 243-260. doi:10.1111/jomf.12147

Ruiz, C. D., & Holmlund, M. (2017). Actionable marketing knowledge: A close reading of representation, knowledge and action in market research. *Industrial Marketing Management*, 66, 172-180. doi:10.1016/j.indmarman.2017.08.005

Runfola, A., Perna, A., Baraldi, E., & Gregori, G. L. (2017). The use of qualitative case studies in top business and management journals: A quantitative analysis of recent patterns. *European Management Journal*, *35*(1), 116-127. doi:10.1016/j.emj.2016.04.001

Santos, G. G. (2016). Career barriers influencing career success. *Career Development International*, *21*(1), 60-84. doi:10.1108/cdi-03-2015-0035

Schmidt, C. (2016). Phenomenology: An experience of letting go and letting be. *Waikato Journal of Education*, *11*(1). doi:10.15663/wje.v11i1.323

Schwerhoff, G., & Sy, M. (2017). Financing renewable energy in Africa–Key challenge of the sustainable development goals. *Renewable and Sustainable Energy Reviews*, *75*, 393-401. doi:10.1016/j.rser.2016.11.004

Seitz, S. (2015). Pixilated partnerships, overcoming obstacles in qualitative interviews via Skype: A research note. *Qualitative Research*, *16*(2), 229-235. doi:10.1177/1468794115577011

Sen, S., & Ganguly, S. (2017). Opportunities, barriers and issues with renewable energy development–A discussion. *Renewable and Sustainable Energy Reviews*, *69*, 1170-1181. doi:10.1016/j.rser.2016.09.137

Serra, C. E. M., & Kunc, M. (2015). Benefits realisation management and its influence on project success and on the execution of business strategies. *International Journal of Project Management*, *33*(1), 53-66. doi:10.1016/j.ijproman.2014.03.011

Shen, W., & Power, M. (2017). Africa and the export of China's clean energy revolution. *Third World Quarterly*, *38*(3), 678-697. doi:10.1080/01436597.2016.1199262

Sila, I. (2018). Linking quality with social and financial performance: A contextual, cthics-based approach. *Production and Operations Management*, *27*(6), 1102-1123. doi:10.1111/poms.12857

Simeone, S., Savini, S., Cohen, M., Alvaro, R., & Vellone, E. (2014). The experience of

stroke survivors three months after being discharged home: A phenomenological investigation. *European Journal of Cardiovascular Nursing*, *14*(2), 162-169. doi:10.1177/1474515114522886

Singh, H. P., Goyal, N., & Kumar, S. (2016). Behavioural biases in investment decisions: An exploration of the role of gender. *Indian Journal of Finance*, *10*(6), 51-62. doi:10.17010/ijf/2016/v10i6/94879

Sovacool, B. K., Heffron, R. J., McCauley, D., & Goldthau, A. (2016). Energy decisions reframed as justice and ethical concerns. *Nature Energy*, *1*(5), 16024. doi:10.1038/nenergy.2016.24

Strantzali, E., & Aravossis, K. (2016). Decision making in renewable energy investments: a review. *Renewable and Sustainable Energy Reviews*, *55*, 885-898. doi:10.1016/j.rser.2015.11.021

Subramanian, K., & Tung, F. (2016). Law and project finance. *Journal of Financial Intermediation*, *25*, 154-177. doi:10.1016/j.jfi.2014.01.001

Szabó, S., Moner-Girona, M., Kougias, I., Bailis, R., & Bódis, K. (2016). Identification of advantageous electricity generation options in sub-Saharan Africa integrating existing resources. *Nature Energy*, *1*(10), 16140. doi:10.1038/nenergy.2016.140

Tate, M., Furtmueller, E., Evermann, J., & Bandara, W. (2015). Introduction to the special issue: The literature review in information systems. *Communications of the Association for Information Systems*, *37*, 103-111. doi:10.17705/1cais.03705

Teoh, K., Coyne, I. J., Devonish, D., Leather, P., & Zarola, A. (2016). The interaction between supportive and unsupportive manager behaviors on employee work

attitudes. *Personnel Review, 45*, 1386-1402. doi:10.1108/PR-05-2015-0136

Torrance, H. (2012). Triangulation, respondent validation, and democratic participation in mixed methods research. *Journal of Mixed Methods Research, 6*(2), 111-123.doi:10.1177/1558689812437185

Tran, V.-T., Porcher, R., Falissard, B., & Ravaud, P. (2016). Point of data saturation was assessed using resampling methods in a survey with open-ended questions. *Journal of Clinical Epidemiology*, *80*, 88-96. doi:10.1016/j.jclinepi.2016.07.014

Trotter, P.A., McManus, M., C., Maconachie, R. (2017). Electricity planning and implementation in sub-Saharan Africa: A systematic review. *Renewable and Sustainable Energy Reviews, 74*, 1189-1209. doi:10.1016/j.rser.2017.03.001

Tsivor, K.K. (2014). Green power: Solution for rural telecom in Africa. *Journal of Knowledge Globalization*, *7*(2), 59-75. Retrieved from http://www.journal.kglobal.org/index.php/jkg

Tufford, L., & Newman, P. (2012). Bracketing in qualitative research. *Qualitative Social Work, 11*, 80-96. doi:10.1177/1473325010368316

Tuyon, J., & Ahmad, Z. (2016). Behavioural finance perspectives on Malaysian stock market efficiency. *Borsa Istanbul Review*, *16*(1), 43-61. doi:10.1016/j.bir.2016.01.001

Ulsrud, K., Winther, T., Palit, D., & Rohracher, H. (2015). Village-level solar power in

Africa: Accelerating access to electricity services through a socio-technical design in Kenya. *Energy Research & Social Science*, *5*, 34-44. doi:10.1016/j.erss.2014.12.009

Urquhart, C., & Fernández, W. (2016). Using grounded theory method in information systems: The researcher as blank slate and other myths. *Enacting Research Methods in Information Systems*, *1*, 129-156. doi:10.1007/978-3-319-29266-3_7

Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice*, *6*(5). doi:10.5430/jnep.v6n5p100

van der Hoorn, B., & Whitty, S. J. (2017). The praxis of 'alignment seeking' in project work. *International Journal of Project Management*, *35*(6), 978-993. doi:10.1016/j.ijproman.2017.04.011

VanScoy, A., & Evenstad, S. B. (2015). Interpretative phenomenological analysis for LIS research. *Journal of Documentation*, *71*, 338-357. doi:10.1108/JD-09-2013-0118

Varpio, L., Ajjawi, R., Monrouxe, L. V., O'Brien, B. C., & Rees, C. E. (2016). Shedding the cobra effect: problematising thematic emergence, triangulation, saturation and member checking. *Medical Education*, *51*(1), 40-50. doi:10.1111/medu.13124

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative-quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly*, *37*(1), 21-54. doi:10.25300/misq/2013/37.1.02

Verleye, K. (2015). The co-creation experience from the customer perspective: Its measurement and determinants. *Journal of Service Management*, *26*(2), 321-342.

doi:10.1108/josm-09-2014-0254

Victor, O. E., Aziz, N. A., & Jaffar, A. R. (2015). Privatization of electricity service delivery in developing nations: Issues and challenges. *International Journal of Built Environment and Sustainability*, *2*(3), 202-210. doi:10.11113/ijbes.v2.n3.82

Viebahn, P., Vallentin, D., Höller, S. (2015). Integrated assessment of carbon capture and storage (CCS) in South Africa's power sector. *Energies*, *8*, 14380-14406. doi:10.3390/en81212432

Vucinic, M. (2016). Behavioural finance and its postulates. *Management: Journal for Theory and Practice of Management*, *21*(80), 67-76. doi:10.7595/management.fon.2016.0020

Wallace, M., & Sheldon, N. (2015). Business research ethics: Participant observer perspectives. *Journal of Business Ethics*, *128*, 267-277. doi:10.1007/s10551-014-2102-2

Wang, S., Li, Q., Fang, C., & Zhou, C. (2016). The relationship between economic growth, energy consumption, and CO2 emissions: Empirical evidence from China. *Science of the Total Environment*, *542*, 360-371. doi:10.1016/j.scitotenv.2015.10.027

Wang, Y., Wang, W., & Wang, J. (2017). Credit risk management framework for rural commercial banks in China. *Journal of Financial Risk Management*, *6,* 48-65. doi:10.4236/jfrm.2017.61005

Watson, R. (2015). Quantitative research. *Nursing Standard*, *29*(31), 44-48. doi:10.7748/ns.29.31.44.e8681

Wesseh, K., Lin, B. (2015). Output and substitution elasticities of energy and implications for renewable energy expansion in the ECOWAS region *Energy Policy, 89*, 125-137. doi.org/10.1016/j.jclepro.2014.11.062

World Bank (2016). Implementation agreements for power PPPs. Retrieved from www.ppp.worldbank.org/public-private-partnership/sector/energy/energy-power-agreements/implementation-agreements

World Bank (2017). Making renewable energy more accessible in Sub-Saharan Africa. Retrieved from www.worldbank.org/en/news/feature/2017/02/13/making-renewable-energy-more-accessible-in-sub-saharan-africa

World Bank (2018). Access to energy is at the heart of development. Retrieved from www.worldbank.org/en/news/feature/2018/04/18/access-energy-sustainable-development-goal-7

Yakubu, M. M., & Jelilov, G. (2017). Effect of energy consumption on GDP evidence from (ten) sub-Saharan Africa countries. *Nile Journal of Business and Economics*, *3*(5), 3-14. doi:10.20321/nilejbe.v3i5.87

Yan, N., Sun, B., Zhang, H., & Liu, C. (2016). A partial credit guarantee contract in a capital-constrained supply chain: financing equilibrium and coordinating strategy. *International Journal of Production Economics*, *173*, 122-133. doi:10.1016/j.ijpe.2015.12.005

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, *20*(2), 134-152. Retrieved from https://nsuworks.nova.edu/tqr/vol20/iss2/12

Yin, R. K. (2017). *Case study research and applications: Design and methods* (6th ed.). Thousand Oaks, CA: Sage.

Appendix: Interview Protocol

Project: Walden University Doctor of Business Administration (DBA) Study

Date: _____

Interviewer: _____

Interviewee: _____

Position Title of Interviewee: _____

[Describe the project; explain to the interviewee about the (a) purpose of the study, (b) multiple sources of data collection, (c) data confidentiality, and (d) completion of the interview in no more than one hour.]

[Provide the interviewee with contact information.]

[Remind the interviewee of the consent form to participate in the study and to audio record the interview.]

[Turn on the skype digital audio recorder.]

Interview Questions:

1. What are the most significant challenges faced when developing power projects in sub-Saharan Africa?
2. What critical steps did you follow during the process of developing a power project in sub-Saharan Africa?
3. What are the critical success factors when developing power projects in sub-Saharan Africa?

4. What are the main risk factors, lenders require to be addressed before financing power projects in sub-Saharan Africa?
5. What business models have you used to successfully secure the debt financing of power projects in sub-Saharan Africa?
6. What are the barriers faced from local governments when developing power projects in sub-Saharan Africa?
7. What are the barriers to managing successful power projects in sub-Saharan Africa?
8. What are the regulatory barriers faced when developing power projects in sub-Saharan Africa?
9. What are your strategies for attracting equity investors into power projects in sub-Saharan Africa?
10. What additional information might you offer regarding successful power projects' development in sub-Saharan Africa?

[Thank the interviewees for their assistance and participation in the interview. Reiterate the study's anonymity of the respondent's responses. Inform the interviewee you will provide him/her a copy of the transcription file for review, approval, and return.]