1-1-2011

The Potential Role of Business Intelligence in Church Organizations

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2012

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Applied Management and Decision Sciences

Walden University

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Abstract

Business intelligence (BI) involves transforming data into actionable information to make better business decisions that may help improve operations. Although businesses have experienced success with BI, how leaders of church organizations might be able to exploit the advantages of BI in church organizations remains largely unexplored. The purpose of the phenomenological study was to explore the perceptions of pastoral leaders concerning the potential usefulness of BI in church organizations. Conceptual support for the study was based on the premise that churches may also benefit from BI that helps improve decision making and organizational performance. Three research questions were used to examine the current role of BI in church organizations, the potential usefulness of BI in church organizations, and potential conflicts that might exist between spiritual and BI management objectives. Semistructured interviews were used to obtain data from 20 pastoral leaders. The data were analyzed using the modified Van Kaam method of analysis. The results indicated that pastoral leaders perceived that BI can be a useful technology in church organizations. Additionally, the pastoral leaders did not perceive any conflict between BI and church management objectives. Church leaders may be able to take advantage of BI to achieve their social outreach programs. As a result, local churches can have a greater social impact on the surrounding communities.

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UMI Number: 3546105

UMI

Dissertation Publishing

UMI 3546105

ProQuest

Dedication

This dissertation is dedicated to my loving brother, friend, and mentor, Luther Kintaudi. It is very difficult for me as I write this dedication knowing that I will not get the chance to show him my completed work. He has always been one of my biggest supporters and believers that I could and would accomplish great things. The seeds of encouragement he planted have been cultivated, and this dissertation is an example of the fruit that has resulted.

Acknowledgments

I express sincere appreciation to my husband Ronnie Felder and all of my family and friends who have supported and encouraged me as I worked to complete my Ph.D. Also, I express gratitude to Dr. Walter McCollum, my committee chair and mentor; Dr. Marcia Steinberger, committee member; and the University Research Reviewer, Dr. Louis Taylor. I appreciate your guidance and support throughout the dissertation process, and your comments and suggestions were instrumental in improving the quality of my work. To every pastor who took the time to share your thoughts and ideas about business intelligence in church organizations, I express sincere gratefulness to all of you, for without your participation, I could not have completed my research study. Most importantly, I truly thank and honor God for blessing me throughout this journey, strengthening me when I needed it most, and for every good thing that comes as a result of completing my Ph.D.

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Chapter 1: Introduction

Introduction to the Study

Business intelligence (BI) is a fast-growing sector in information technology (IT). From a broad perspective, BI involves transforming data into actionable information to make better business decisions that may help improve operations, increase profits, strengthen a competitive position, or bring about other advantages.   Rajesh (2008) noted that the concept of BI has existed since the time when data were first collected to make informed decisions.

Contemporarily, BI has an association with both technology and processes that help bring about the transformation of data into useful and actionable information. Some of the tools and technologies affiliated with BI are online analytical processing, decision support systems, query, reporting and analysis tools, analytics, dashboards, data mining, enterprise performance management, and predictive analytics (Rajesh, 2008). The purpose of these tools is to manipulate data and allow searches of specific information for reporting and analysis.

Business intelligence is applicable and advantageous in various types of businesses and industries. Business intelligence enables business leaders to take a more proactive stance by allowing greater visibility into operations and thus giving decision makers the ability to respond more quickly to opportunities or in response to potential challenges (Ranjan, 2008). For example, a company using BI technology would be able to capture customer data, analyze trends, and strategize on how to profit from the

identified trends. However, despite the related benefits of BI, acquiring and employing the technology can be difficult monetarily and otherwise.

Managing BI requires money, skilled personnel, and an accommodating infrastructure. Establishing a business case for the implementation of BI is necessary. In searching for business justification for BI, the general benefits are numerous and include (a) creating or maintaining a competitive advantage, (b) responding skillfully to economic recessions, (c) increasing business value, (d) responding to rapid changes in the business environment, and (e) solving complex business problems (Foody, 2009; Mircea & Andreescu, 2009; White, 2009). Employing BI must make good business sense for each organization.

One area that has received little attention is BI in church organizations. Whether the associated benefits of BI would be helpful for church organizations is unclear. Many of the benefits of BI are oriented toward the objectives of for-profit organizations. Church organizations and other nonprofits are unique because they do not share the same financial motives as for-profit organizations (Lightbody, 2003). However, the benefits of BI may contribute to better decision making based on quality information provided by BI technology and processes, and as such, improved decision making is essential for both for-profit and nonprofit organizations.

Improved decision making is one of the main, and most frequently cited benefits, of BI. Having this essential benefit may be enough justification for some organizations; however, other factors may include cost and availability of skilled personnel. For whatever organizational leaders want to achieve, having the right information is critical

for making the best informed decisions. As a result of improved decision making, often-cited subsequent benefits include competitive advantage and improved operational efficiency (Foody, 2009; Glaser & Stone, 2008; Rajesh, 2008; Ranjan, 2008), both of which may be beneficial to church organizations.

Chapter 1 contains justification and rationale for the research study through an overview of the topic, the statement of the problem and its background. Also, justification and rationale for the research is supported through a discussion of conceptual support, purpose and nature of the study, and significance of the study. The chapter also includes research questions and the assumptions, scope, delimitations, and limitations of the study.

Problem Statement

Although numerous researchers (Copacino & Pendrock, 2007; Hennen, 2009; Hocevar & Jaklic, 2010; Kosambia, 2008; Ranjan, 2008; Rudd, 2009) have noted the many benefits of implementing BI in for-profit business, researchers have paid little attention to any potential benefits for nonprofits such as church organizations. Because the most noted benefit of BI is improved decision making, church leaders may desire to establish a business justification for BI as well. Although researchers have conducted extensive research to examine the role of BI in for-profit businesses, little is known about the role of BI in church organizations.

Information technology currently serves a limited purpose in smaller congregations. The high cost of certain technologies could be the cause, but the specific reason is unclear. However, in megachurches, technology has a much broader use, as Kelley (2008) described: Tithes and offerings as well as other donations can be paid

electronically, Wi-Fi access allows users to search Bible verses online, websites can be used for outreach programs, and audiovisual technology can be used during worship services. Such technologies help streamline certain processes and increase the potential to reach out to more people at one time.

Churches have missions that involve serving not only the members of their congregation but also their communities (Lelon, 2003; Niemandt, 2010). Some church leaders use IT to a limited extent to help carry out church missions (Kelley, 2008). Business intelligence may be a valuable tool to respond more effectively to the needs of both congregations and communities. Church leaders might be able to use BI to capture data related to their missionary objectives and use the analysis tools to design more effective outreach programs.

Background of the Problem

Christian church organizations often have both spiritual and social objectives. The spiritual focus provides a unique operating environment (Cone, 2005): Leaders must not only concern themselves with operational efficiency and managing resources, but must also attend to spiritual matters according to the teachings in the Bible, which serves as the fundamental reason for establishing a local church. Many churches have a social objective in which church members reach out to serve the needs of the community with outreach programs such as food, homeless, and counseling programs. These objectives vary from a traditional business environment in which the primary focus is profit.

Church leaders face many challenges in trying to achieve their objectives. For instance, many churches have small memberships. According to the Hartford Institute

for Religion Research (2006), 59% of Protestant and other Christian churches (excluding Catholic/Orthodox) have fewer than 100 members. Thirty-five percent have fewer than 500 members (Hartford Institute for Religion Research, 2006). As nonprofit organizations, churches are reliant on donations for financial support; the donations come mostly from regular members rather than from third-party donors or other organizations. Because regular church attendance can be a challenge, even though registered membership may be higher, the financial support from members can be inconsistent and inadequate. Twenty-three percent of congregations in the United States in 2006-2007 received less than $25,000 in donations from all sources (National Congregations Study, 2008). Thus, it can be a challenge to get members to donate substantially. Insufficient donations can lead to financial hardship for churches concerning basic operating needs, and other outreach programs and initiatives become less financially viable.

Typical church personnel, many of whom are volunteers (Hager & Brudney, 2004), usually lack IT experience. However, as recent research suggests, technology and IT specifically do play a critical role in churches. Heist (2011) explored IT management, business processes, and strategic planning in churches and found a significant and positive relationship between IT management effectiveness and church worship size. Heist suggested that effective IT management may have a positive effect on church operations and enable church leaders to improve their local community programs.

Burch (2009) researched technology adoption in nonprofit church-based organizations and found that certain organization, leadership, and membership characteristics affect the level of IT use in the organizations. The findings indicated that

certain organizational characteristics affect IT adoption in churches. Additional research may help explain why some churches experience a higher rate of IT adoption than others.

Although some research is available concerning IT in church organizations, it is not extensive. Information technology in churches is a relevant topic for research and can have a positive social impact. Stevens and Morgan (as cited in Heist, 2011) noted that technology is an imperative component for any type of organization; however, nonprofits burdened with limited resources require additional support and attention.

Studying IT in churches from the perspective of BI may be worthwhile. Business intelligence may help improve organizational operations, maximize limited resources, solve complex business challenges, and respond to market opportunities and challenges (Ranjan, 2008). Such benefits may translate into the nonprofit environment and find a parallel use. Given the challenges that church leaders face, researching possible solutions such as BI that may be useful in helping church leaders overcome these challenges was constructive.

Purpose of the Study

The purpose of the qualitative phenomenological study was to explore the perceptions of pastoral leaders concerning the potential benefits of using BI in church organizations and to determine if BI has value for church organizations. In light of the absence of research into this specific area, the study was exploratory. An examination of the thoughts of pastoral leaders who are decision makers for both spiritual and business initiatives was necessary to determine if BI is an appealing and feasible strategy for churches. Gaining an understanding helped to lay a foundation for possible further

research on the topic. Furthermore, by understanding the potential effect of BI in church organizations, additional research may indicate how church leaders can take advantage of BI benefits. Churches may become more expedient and resourceful as a result of BI and better able to serve the needs of their surrounding communities.

Conceptual Support for the Study

Tackle (2009) introduced the concept of church intelligence. Church intelligence is the equivalent of BI but for the church environment. The main concept is the same: using technology and process to collect and analyze information for the purpose of improved decision making in achieving organizational goals. Tackle asserted that church leaders administer churches like companies; they not only need to track the data they capture but they need to understand it as well. Thus, church intelligence, or BI for a church environment, may become effective for churches.

Tackle (2009) noted that church leaders are already capturing information and described how to take the information gathered into the intelligence arena. For example, many churches have records of attendance that can translate into information that would help decision makers, such as pastoral leaders, understand their congregation better. Using attendance records beyond basic tracking purposes can result in useful information such as various demographics and preferences regarding which type of services members attend (e.g., Bible study or worship service).

Similar to for-profit businesses, the church environment is changing, and technology is opening new doors to conducting business in innovative ways. Tackle (2009) contended that for survival, church leaders will need to be able to keep up with

new trends both inside and outside the church. Such actions are critical for effectively reaching the intended audience.

Another idea worth noting is spiritual intelligence. Given the nature of the work of pastoral leaders, spiritual intelligence plays a role in how they operate their church organizations. A link exists between spiritual intelligence and the ability to solve problems via spiritual experiences (Hyde, 2004). Business intelligence may be able to provide additional support using IT to help improve problem solving. Thus, spiritual intelligence, which is the human component, and BI, which is the technology component, may be used together for more effective problem solving and decision making for improved organizational performance.

Business intelligence implementation has expanded into small and midsize businesses (SMBs). Business intelligence is no longer a novelty for SMBs, and the focus now is on how to use BI effectively and take advantage of the associated benefits (Wise, 2010). Many church organizations are similar to SMBs in the sense of size, internal structure, and operations; thus, BI may play a comparable role in churches as well. Small and midsize churches (SMCs) have lower income from donations than larger churches due to smaller memberships. Staff is generally small and some churches rely on volunteers. Y. Chen, Chong, and J. Chen (2000) noted that church management is similar to small business management because both tend to have simple organizational structures and centralized leadership. Information technology infrastructure is small and managed informally. Schneider (2003) noted that leaders of small, minority-based

nonprofits have difficulty becoming familiar with new technologies as a result of low funding and lack of staff.

Leaders of SMBs must cope with limited resources as well. Compared to larger enterprises, leaders of SMBs do not optimize the use of IT as effectively as leaders of large businesses. Cataldo, McQueen, and Sepulveda (2011) provided three reasons why leaders of SMBs do not use IT as effectively as leaders of large businesses: (a) they lack a clear roadmap for implementation; (b) given their lack of resources, they have a strong operational focus, and their priority is to run the business, which leaves few resources to support nonoperating activities such as IT management; and (c) they often have inadequate staff lacking IT knowledge and skills. Nevertheless, new offerings in IT have become available in recent years to help overcome such challenges.

Leaders of SMBs have been increasingly taking advantage of current technologies tailored for smaller enterprises. One popular trend is software-as-a-service (SaaS), which allows business leaders to pay a recurring fee to use software that runs on a vendor's systems. One benefit to SaaS is that total cost of ownership is significantly lower than traditional BI solutions, thus making it an attractive option for organizations with limited resources (Thompson & Van der Walt, 2010). With this new type of delivery for IT products, BI solutions become more attainable for companies of all sizes.

Business intelligence operated in-house requires a powerful infrastructure and is an expensive undertaking for even larger corporations. Employing a SaaS solution for BI technology allows company leaders to reduce their operation cost (Raths, 2008). Other benefits include financial flexibility, lower cost for maintenance and support, and

accessibility of the service from any location (Thompson & Van der Walt, 2010).

Leaders of SMBs using SaaS for BI would be able to forgo a large upfront capital

investment; instead, the cost would be a lower ongoing operating expense. More

flexibility comes with the ability to scale up or down on demand (Raths, 2008). Also, the

vendor is responsible for upkeep of the hardware and software. Finally, a cloud

environment that enables SaaS solutions means that the service is accessible from any

location and is an advantage for geographically dispersed businesses.

 The cloud environment has a straightforward structure. Thomas and Van der Walt

(2010) explained how the cloud environment works. Data from the client environment

will be extracted, transformed, and loaded into the data warehouses that reside in the

cloud. Data warehouse and mining tools will transform the data into useful information.

The client will be able to access this information in the cloud environment and drill down

into the information and produce relevant reports for strategic decision making. The

SaaS solution for BI includes easy-to-use interfaces for displaying the information.

 There are some challenges to choosing a SaaS solution to consider. Costly

transfer of large data sets to the cloud, keeping sensitive data protected, and a currently

limited offering of services in the cloud by BI vendors all present certain issues

(Thompson & Van der Walt, 2010). The potential advantages are substantial, and there

are ways to overcome these challenges. For example, more controls can help protect

sensitive data.

 With options such as SaaS for BI technology, SMBs have a chance to partake of

BI benefits for improved decision making, even with limited resources. Similarly, SMCs

can benefit from tailored solutions, whether it is SaaS or something not yet created, as long as it addresses the challenges SMCs face concerning IT implementation and management. If desired, SMC leaders can find ways to improve church operations and achieve mission objectives with the help of BI.

Assumptions

Assumptions were necessary to narrow the scope of the study by providing contextual constraints for the target population. The following assumptions were used for the study:

1. Pastoral leaders experience different types of technologies, both in their personal lives as well as in their church organizations.

2. Pastoral leaders are responsible for changes in their churches.

3. Pastoral leaders either are primarily responsible for or significantly influence church decisions.

4. Pastoral leaders have a clear vision and direction for their church.

5. The interview participants were pastoral leaders who completed education in a school of divinity.

6. The interview participants understood the questions asked and provided honest and accurate answers.

Scope and Delimitations

The focus of the study was SMCs in Los Angeles, CA, with predominantly African American congregations. For the purpose of the study, SMCs were those with membership or weekly attendance of less than 500 persons. Large churches were those

with more than 500 and less than 2,000 members or weekly attendees. Megachurches were churches that have membership or weekly attendees over 2,000. This study was qualitative in nature, and, as such, the findings are not generalizable to all churches. Additionally, the focus of the study was on the perceptions of the phenomenon of BI in church organizations and did not involve probing into any experience with the phenomenon. The focus was on the perception of BI in church organizations and based in the context of the lived experiences of pastoral leaders.

Limitations

Limitations of the study included sample size, diversity of the sample, and the concept under study. The sample size for the study was small, as is common in qualitative studies. The ability to extract rich in-depth information from the participants via semistructured interviews countered the limited size of the sample. Also, the small sample meant that results were not generalizable beyond the sample. Due to the narrow scope of the study, the diversity of the sample was limited. By choosing congregations with a large proportion of African Americans in one particular geographic location, the pastoral leaders selected for interviews shared commonalities. Demographics of the interview participants were similar. The subject matter of the study was another limitation. Business intelligence in general is still a relatively new technology defined and perceived in various ways. It was likely that pastoral leaders with no formal IT training or education will not be familiar with the concept. To address this ambiguity, a brief description was provided to the participants so that they could reflect on its meaning. Additionally, a brief discussion took place with each participant prior to the

interview to help ensure the participants understood what BI is and to address any questions they had regarding the BI concept. Furthermore, questions during the interview included terms and concepts that were familiar but still described the BI concept.

Nature of Study

The goal of the study was to explore the perceptions of pastoral leaders concerning the potential benefits of BI in church organizations. The study was exploratory in nature and determined if BI has value in church organizations and warrants further research into this little known subject area. A qualitative approach was appropriate for the study because it is designed to yield rich data and allows for flexibility in data collection. More specifically, a phenomenological design was appropriate because the focus of the study was the collective perceptions of pastoral leaders.

A qualitative design, as opposed to a quantitative design, was appropriate for the research study because little was known about the topic under study. Researchers in quantitative studies focus on operationalizing concepts, specifying variables, and using statistical procedures to describe the relationship between those variables. The study was exploratory, and potential variables have yet to be considered. A phenomenological approach was appropriate as it entailed analyzing the perceptions of pastoral leaders concerning BI and gaining an understanding of the potential usefulness of BI in churches. A more detailed discussion of the research design appears in Chapter 3.

Definition of Terms

Business intelligence (BI): According to Raisinghani (as cited in Popovic, Turk, & Jaklic, 2010), BI is a general term for applications, platforms, tools, and technologies

that support the process of exploring business data, data relationships, and trends. BI

provides an executive with timely and accurate information to better understand his or

her business and to make more informed, real-time business decisions. (p. 7)

Church (parish) management: Working to achieve the organizational mission of

the church through the activities of planning, organizing, leading, and managing the

resources of the church (Lelon, 2003).

Megachurches: Churches that have an average weekly attendance of more than

2,000 people (Cone, 2005).

Pastor (pastoral leader): Used synonymously throughout this report to refer to

the spiritual and managerial leader of the church.

Research Questions

The following research questions were constructed to address the purpose of the

study. The answers to the questions provide insight into pastoral leaders' perception of

BI and its potential role in the church.

1. What is the current role of IT in church organizations?

2. What is the potential usefulness of BI in church organizations?

3. What potential conflicts, if any, might exist between spiritual and BI

    management objectives?

Significance of Study

Identifying pastoral leaders' perceptions concerning the potential usefulness of BI

in the church environment is important. By determining if BI has value for the church,

more research into this little known area would become more relevant. Particularly for

SMCs, optimizing the use of limited resources is critical to operate effectively and to achieve the goals of the organization. Additionally, the focus of the study was on SMCs with predominantly African American congregations in Los Angeles. The churches are typically located in lower income neighborhoods. If a basis is established that justifies additional research into this area, more research can be undertaken to determine how the church leaders can take advantage of the benefits of BI. If minority churches become more viable as a result of BI, they may better serve the needs of their surrounding communities.

Summary and Overview

Information technology is not foreign in the church environment. However, IT use in the church, particularly in SMCs, typically involves general use of the Internet, e-mail, and basic church management software to track finances. For-profit and nonprofit organizations have fundamental differences. In nonprofit organizations, leaders concentrate on causes, whereas in for-profit organizations, leaders concentrate on profits; leaders of nonprofit organizations often rely on a voluntary workforce and funding from government and membership (Riggio, Bass, & Orr, 2004). Despite these differences, BI may be applicable in the nonprofit church environment, as suggested by Tackle (2009) in an article about church intelligence.

The information presented in Chapter 1 provided justification and rationale for the research study through an overview of the topic, the statement of the problem and its background, conceptual support, purpose and nature of the study, and significance of the study. Furthermore, the chapter included research questions and the assumptions, scope,

delimitations, and limitations of the study. Chapter 2 includes a review of the literature

that supports the research study. The literature review contains information regarding BI,

namely its description, benefits of implementation, and its role in small businesses.

Information is presented concerning church management and the use of IT in the church.

Chapter 3 contains a discussion on research design, population, sampling procedures,

instrumentation, and data collection and analysis. Chapter 4 contains the findings of the

research study and Chapter 5 contains the interpretation of the findings along with

implications for social change, recommendations for future action, and recommendations

for future research.

Chapter 2: Literature Review

The literature review is organized around two main themes. First, the review covers BI and its characteristics, justification, and associated value. A discussion of BI in small businesses is appropriate because small businesses share several characteristics with small churches. Current trends in BI are presented as well. The second part of the review covers church organizations, specifically organization and leadership characteristics and the use of IT in churches. The literature review concludes with a section on research methods used in related studies. The literature review contains an overview of the two main concepts of the study: BI and church organizations. Because virtually no research exists on BI and church organizations together, BI is treated separately from church organizations. However, IT, which is an umbrella that covers BI, is addressed as it relates to churches to provide a summary of the role of IT in this particular environment.

The literature review involved a variety of research databases, including Academic Search Complete, Business Search Complete, Computers & Applied Sciences Complete, and ProQuest. Industry websites relating to BI included Information Management, BeyeNetwork, and the Data Warehousing Institute. Some of the primary key terms used were *business intelligence, business intelligence implementation, business intelligence strategies, trends in business intelligence, cloud computing, religion and technology, church organizations, church leadership, church business practices, nonprofit organizations, nonprofit technology, IT management,* and *IT adoption in nonprofit organizations.*

Defining BI

There is no uniform definition of BI. Some people have chosen to define it more narrowly as solely a technology product whereas others define the term much more broadly. Another way BI tends to be classified is either with a technological focus or with an organizational focus. Negash (2004) offered a technologically focused definition for BI: "BI systems combine data gathering, data storage, and knowledge management with analytical tools to present complex internal and competitive information to planners and decision makers" (p. 178). Olszak and Ziemba's (2003) organizationally focused definition is "a set of concepts, methods, and processes that aim at not only improving business decisions but also at supporting realization of an enterprise's strategy" (p. 859). Regardless of the focus, BI encompasses both technology and business processes, entails translating data into actionable information, and is beneficial for promoting better decision making. Business intelligence includes the technological tools used to store and extract data as well as the organizational process of analyzing the data that result in intelligence.

Researchers use various tools and technologies to extract and analyze data, including decision support systems, query, reporting and analysis tools, online analytical processing, analytics, dashboards, data mining, and predictive analytics (Rajesh, 2008). Many of these technologies are interrelated, and the most commonly used tools are the query, reporting, and analysis tools (Rajesh, 2008). These tools allow for customized reports and support analysis.

Business intelligence is widely applicable to many types of businesses across a variety of industries. Further, BI results in greater transparency and empowers business leaders to pursue market opportunities more promptly, resulting in a business environment that is less reactive and more proactive (Ranjan, 2008). With capabilities such as these, BI becomes an attractive business opportunity for many organizations.

Business Justification for BI

Establishing a business case for BI requires understanding how it may affect the organization and knowing what the expected benefits are to assess the results properly. Organizational leaders have need of actionable intelligence to construct and execute corporate strategies. This need is at the foundation of many BI initiatives. Callender and Danzing (2007) stressed that this information requirement exceeds accounting and customer information; information from all avenues, including operational, marketplace, economic, and organizational intelligence, is necessary. Operational intelligence reveals operational effectiveness. Marketplace intelligence provides knowledge about the customers, competitors, and suppliers of an organization. Economic intelligence highlights the financial performance. One form of intelligence that receives less attention than the others is organizational intelligence, which consists of the collective knowledge and capabilities retained by the employees. Decision makers must have actionable intelligence from multiple viewpoints within organizations for more holistic, strategic, and effective decision making.

There are other justifications supporting the implementation of BI. Business intelligence can help create or maintain a competitive advantage and may help provide a

deft response to overcome economic recessions. Business value may increase. Finally, BI may help organizational leaders navigate a volatile business environment more skillfully. Confronted with increasing competition, business leaders must find ways to differentiate for the survival of a business. Competitive advantage strategies facilitated by BI have evolved into a niche area of research called competitive intelligence. Anica-Popa and Cucui (2009) noted that competitive intelligence has gained attention since the early 1990s, in part due to impressive developments in IT and communications and an exponential increase in Internet use. Supporting the primary goal of enhancing the competitiveness of an organization, competitive intelligence is used to identify potential customers and competitors, analyze the business environment, and comply with new legislation or regulations.

The global economy tends to rotate in and out of recessions. One way for businesses to survive is to strategically use BI. To remain viable, leaders of companies must discover ways to cut costs and rethink the way they do business. Mircea and Andreescu (2009) contended that BI is capable of helping businesses achieve more than survival by differentiating themselves and becoming leaders among the competition. White (2009) echoed these sentiments concerning how businesses can overcome recession woes and explained that maximizing revenue, even as sales are declining, and cutting costs can make the difference. A survey of 250 companies conducted by the Aberdeen Group indicated that the best performing companies during a recession use BI technologies more than all other organizations (White, 2009). Beyond surviving in a fiercely competitive environment, business leaders aim to increase the value of their

organizations. Using BI optimally, managers can make the key decisions that will serve to achieve this objective.

Foody (2009) discussed the role of BI to address a volatile economy. Foody asserted that a volatile economy makes forecasting for businesses difficult. Moreover, there are constant changes both with the financial markets and with consumer behavior. Obtaining data about these activities is not the issue, and it can be argued that an overload of data exists. Data warehouses store large amounts of data and the Internet supplies a virtual flow of information necessary for assessing external factors. The goal is to know which data are necessary and then to extract actionable intelligence from the data.

The primary benefit of implementing business intelligence is improved decision making, which is sufficient justification for implementing some form of BI. Cost, among other factors, will influence to what degree and what type of BI is implemented. Whether desiring to survive or thrive in a recession, differentiate from the competition, or perform some other strategic maneuver, having the right information is crucial for optimized decision making (White, 2009). Business intelligence achieves these kinds of objectives. Other common benefits associated with BI that are outcomes of improved decision making are cost savings and improved operational efficiency, increases in revenue, improvements in customer retention, quicker adaptation to changes in market conditions, and many others (Foody, 2009; Ranjan, 2008; White, 2009). The business case for BI is compelling and it is customizable to the needs of each organization.

Assessing the Value of BI

Business intelligence generally requires a substantial initial and ongoing

investment of resources. In addition to establishing a business justification prior to

implementing BI, assessing the value of BI post-implementation is necessary. Also,

assessing the value of BI is helpful from a research point of view. As with many large IT

projects, BI projects tend to be expensive and yet often do not yield many of the

advertised benefits. There tends to be a disconnection between the technology

requirements and the business requirements that commonly lead to bad implementations

(Gruman, 2007). As a result, a large number of BI projects tend to be labeled

unsuccessful. Information technology projects in general have a high failure rate

(Buckley, 2008; C. C. Chen, Law, & Yang, 2009; Iranmanesh, Shirkouhi, & Skandari,

2008). Thus, research that highlights what to look for in evaluating BI or helps confirm

the value of BI may be beneficial.

Assessing the value of BI is a complex and difficult task. Researchers have made

several attempts to address this concept. For example, Elbashir, Collier, and Davern

(2008) developed and tested a method to measure the realized business value of BI. The

measurement involved addressing business-process-level performance and organization

performance and exploring the relationship between the two. Using the developed

measurement, Elbashir et al. found that a significant relationship exists between business

process performance and organization performance, which means that improvements in

business process performance enhance organization performance as a result of BI.

Embedded in this finding was that BI generates benefits at both the process and the

organization level, including improvements in value chain activities (e.g., supplier and customer management) as well as increased profit margin, increased sales, and an improved profit margin.

Popovic et al. (2010) proposed a conceptual model for assessing the business value of BI systems. In the model, Popovic et al. confronted the issue from the perspective of facilitating the use of quality information resultant from BI systems to achieve improvement in business processes and, by extension, overall business performance. Similar to the aforementioned measurement method constructed by Elbashir et al. (2008), Popovic et al. illustrated the connection between BI and improvements in business process and organization performance. The difference is that the focal point is exploring BI systems' absorbability so that information quality is exploited, thereby yielding key benefits.

Information quality is the essential product of BI systems. The goal is to transform data into usable information for strategic business decisions, which is not always a simple task. Data can be in noncompatible systems and not easily integrated. It might take too long to acquire information from the data sources for the information to be useful. Additionally, an organization might collect so much data that decision makers may be unaware of all the potential information that can be extracted. These are examples of poor information quality. Popovic et al. (2010) contended that BI systems produce value when they can reduce the gap between data collected and quality information that is available for business decisions.

Evaluating whether the BI system produces quality information is only one element to consider. Another aspect of the conceptual model is BI system maturity. The idea is that the higher the maturity level, the greater the BI system can be exploited for its capabilities. According to the model, the BI system's maturity is the foundation from which the benefits are derived. A higher level of BI maturity likely leads to better information quality. Popovic et al. (2010) noted that the quality information produced by itself does not generate business value; rather, the use of the quality information leads to improved business processes and finally improved business performance.

Hocevar and Jaklic's (2010) view on the issue of assessing the value of BI consisted of a customizable approach as appropriate for each case. Traditional evaluative methods for IT projects consist of calculations such as return on investment, net present value, and internal rate of return. However, classic methods such as these may be inappropriate or provide an incomplete assessment (Elbashir et al., 2008; Hocevar & Jaklic, 2010) because measurements such as return on investment, net present value, and internal rate of return are not conducive for measuring the intangible benefits that should be considered as well. Thus, a holistic cost-benefit approach is necessary and must be tailored for each situation.

Measuring the costs as opposed to the benefits is not as complex, although not entirely simple. All types of costs should be considered, including (a) total cost of investment, (b) current costs, (c) preliminary costs, (d) opportunity costs, (e) reduced benefits, (f) limitations of the system, and (g) cost of risk (Hocevar & Jaklic, 2010). Several of these costs can be difficult to quantify, and determining all of the benefits can

be even more problematic. Many of the benefits may be indirect, nonquantifiable, or unpredictable (Carver & Ritacco, 2006). Other evaluation methods discussed by Hocevar and Jaklic are total cost of ownership, case studies, subjective evaluation, and strategic analysis. Based on each case, one or a combination of approaches can be used. Also, qualitative methods of evaluation such as strategic analysis can be particularly effective for evaluating the value of BI investments.

Similarly, Beckerle (2008) advocated for a customized approach with BI and explained that a tailored approach from the very beginning, even prior to implementation, would allow the BI system to deliver the most value. Any time a BI system solves a specific problem for an organization or allows the organization to take advantage of an identified opportunity, the BI system will be regarded as having delivered value. In cases like this, a direct connection exists between problem and solution.

Until now, the focus of the discussion on assessing the value of BI has been from the perspective of economic justification (i.e., the BI implementation yielded the desired benefits that justified the investment). The other purpose for assessing BI value is to manage the ongoing utilization of the technology so that it continues to optimally meet the need of its users. Ghilic-Micu, Mircea, and Stoica (2010) introduced the idea of auditing BI solutions and purported that a BI audit is worthwhile for BI assessment. Inefficiencies and other issues are likely to be exposed when auditing BI systems. Other opportunities for exploitation may be brought to light. The audit process presented by Ghilic-Micu et al. was comprehensive, explained the several steps of a BI audit, and

included recommendations on conducting a postaudit assessment. A BI audit helps to ensure the BI system produces quality information.

BI in Small Businesses

Increasingly, leaders of SMBs are adopting BI solutions for their smaller organizations with limited resources (Mikell, 2008; Shankar, 2008). Smaller organizations have to compete more aggressively and therefore require useful information on which to base their strategic decisions (Canes, 2009). Leaders of SMBs are in need of timely and accurate information to help make strategic and profitable decisions just like their counterparts in larger organizations. Technology advances in addition to BI are allowing SMBs to compete more effectively with other SMBs as well as with larger corporations and on a global scale. Furthermore, BI vendors have introduced less expensive BI products for the SMB market, making BI more affordable and attractive for SMBs.

The BI solutions available to SMBs tend to be user friendly and do not require a large IT staff to maintain. Mikell (2008) noted that an advantage SMBs have over larger companies in implementing BI is that implementation for SMBs tends to be less complex. Issues involving planning, IT infrastructure, data quality, resistance from IT, and establishing a business case are less prevalent, which allows for a smoother, quicker, and less expensive BI project for SMBs, although no IT project is without risk or problems to overcome.

One particular way leaders of SMBs are able to take advantage of BI solutions without a large capital investment is through SaaS, which is becoming more popular.

Using SaaS allows BI solutions to be offered over the Internet in a cloud environment. A cloud environment relieves an organization from needing to maintain the BI infrastructure in-house and transfers the burden of required processing power to run BI solutions to the vendor hosting the service. Benefits include lower costs, greater flexibility, less staff required in-house to monitor the technology, and the ability to scale up or down based on the current needs of the organization (Raths, 2008). Business intelligence SaaS is still in its infancy, but has untapped potential. The benefits of BI SaaS are promising and could change the landscape of BI even as other IT solutions move to the cloud environment.

As more SMB leaders continue to adopt BI solutions for their organizations, it becomes essential to understand the characteristics of best practices for this segment of organizations. The Aberdeen Group conducted research that yielded data from 650 end-user organizations and resulted in an in-depth report that illustrated best practices and provided recommendations for leaders of SMBs looking to help their organization become high performing. The key findings described in the report are as follows (Lock, 2008):

- Leaders of 95% of SMBs report using or planning to use some form of BI.
- The top reasons for deploying BI are to (a) improve speed of access to relevant business data, (b) improve integration of data from divergent applications, and (c) provide analytical capability to more end users.

- Best-in-class strategies for managing BI solutions are understanding end-user requirements, automation, culture and adoption, and integration and data management.

- Recommendations to improve BI performance are to (a) examine methods to automate report generation and delivery, (b) create a formalized training program for BI use, and (c) investigate the use of data cleansing tools.

- Recommendations for industry-average SMB leaders to improve BI performance are (a) define the BI and IT skill sets necessary to meet goals, (b) improve the ability to monitor use of the BI system, and (c) invest in BI dashboard technology.

- Recommendations for best-in-class SMBs to improve BI performance are (a) establish a BI center of excellence and (b) leverage automated alert reporting tools.

The constraints within which SMBs operate make it necessary to prioritize certain factors when selecting a BI solution. Costs and ease of use for end users are important considerations because they would allow organizational leaders to adopt at least some form of BI and introduce it into the organization. From there, as organizational maturity increases, the leaders will be able to augment their BI capabilities and improve BI performance.

Despite the traditional high cost and resource requirements of BI deployment, leaders of SMBs are discovering that BI can be a valuable asset to their organizations (Mikell, 2008; Shankar, 2008). Business intelligence vendors are introducing more

affordable BI solutions for SMBs that allow leaders to boost their business performance and compete with larger organizations (Mikell, 2008). Recommendations such as the ones above may help SMB leaders exploit their BI solutions more effectively no matter what level they are on.

Trends in BI

A movement toward combining BI and business performance management applications is an expected trend in the near future (Simons, 2008; Wailgum, 2008). Business performance management involves business analytics for supporting corporate performance and has many similarities with BI. To a certain extent, BI is a solution that supports overall performance management strategies. The two business solutions are strongly compatible, which makes BI a good candidate for consolidation in software applications.

Another trend is more concerted efforts to embed BI into operational business processes. By embedding BI into operational business processes, the decision makers access BI tools directly and can take specific action toward achieving particular goals (Chickowski, 2009). Twentyman (2007) indicated that lower level employees need access to the same information as senior management to work effectively toward meeting the goals that senior management set. Embedding IT at the operational level is complex, yet the strategy may be vital for optimizing maximum value from BI.

User-centric BI emerged from the problem of failed BI implementations due to end users not adapting to the technology. The way to approach user-centric BI, according to Chickowski (2009), is to recognize the need for a tailored approach and to design a

system that fulfills the distinctive needs of various users. The strategy addresses the goal of having BI ingrained at the operational level. User-centric BI encourages users to use BI tools more effectively because of the intuitive and user-friendly interfaces.

Predictive analytics is one of the more anticipated trends on the horizon and has the potential to make a significant difference in the optimal use of BI. Current BI tools allow for data integration and analysis of information based on historical results. Predictive analytics utilizes both current and historical data to make predictions, which involves going one step beyond real-time analysis in which patterns are identified from fresh data. Business intelligence becomes much more valuable when predictions are possible. For example, more accurate predictions mean that managers can make preemptive moves to cut costs and engage in more profitable strategies (Chickowski, 2009). Predictive analytics represent a promising opportunity to leverage BI beyond its current capabilities.

Business intelligence adoption and expansion within organizations show no signs of decreasing. In a survey conducted by Forrester, more than 49% of representatives from companies who responded to the survey indicated that they had firm plans to implement or expand the use of BI software within the next 2 years (Kisker, 2010). Thus, it becomes more critical to learn how to translate BI investment and expansion into BI success. The key, according to Evelson (2011), is agility, and the four major subcategories associated with agile BI technologies are automated, unified, pervasive, and limitless.

Agility gives an organization the capability of being able to adjust and adapt to changes within the organization so that new features or enhancements to BI are not required. The agility described here goes beyond software development to encompass best practices that result in more flexible BI (Evelson, 2011). However, the organizational structure and culture must be conducive to hosting an agile environment.

Evelson (2011) predicted that the way BI is implemented will change drastically while the same challenges such as data governance and data quality endure. The focus will be on technologies and processes that support agile BI with an emphasis on user self-service. Additionally, Evelson purported that the role of IT would be reduced to managing data preparation.

Church Organization and Leadership

Christian churches share a common overall objective. The objective is to convert people to become followers of Christ. This is the great commission:

> Then the eleven disciples went to Galilee, to the mountain where Jesus had told them to go. When they saw him, they worshiped him; but some doubted. Then Jesus came to them and said, "All authority in heaven and on earth has been given to me. Therefore go and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit, and teaching them to obey everything I have commanded you. And surely I am with you always, to the very end of the age." (Matthew 28:16-20, New International Version)

Churches have many other objectives to accomplish as part of their ministries that can be generally found in their individual mission statements. Yet another common

characteristic of churches is to serve the needs of their congregations and the surrounding communities. Many churches have an international focus in which their members seek to serve other nations as well.

Churches run on a nonprofit status and therefore share commonalities with other nonprofit organizations. Limited resources, reliance on volunteer staff, and reliance on voluntary giving from donors are a few similarities. Management of organizational resources is an important task. In church management and leadership, the roles have unique distinctions. Lelon (2003) described church management as the "process of planning, organizing, managing, leading, and controlling the resources" (p. 106). This process is akin to any other organization that needs to manage its resources to ensure ongoing operations.

The primary focus of leadership in the church is the spiritual mission and objectives of the church (Heist, 2011). There may be some overlap with church management, but they are two distinct functions. Leadership has the responsibility of leading according to biblical principles. Lelon (2003) further associated leadership in the church with terms such as change, growth, and risk taking. Furthermore, leaders in the church are expected to live their personal lives according to biblical principles and serve as examples to their members while teaching them to do the same thing.

The spiritual management and practical management of church organizations are often viewed as disparate activities (Lelon, 2003; Siu, 1999). Siu (1999) explained that leadership and church management should be complementary. Similarly, Lelon (2003) argued in favor of treating churches as managerial organizations while maintaining

spiritual integrity. Siu did not view the spiritual element of leadership as incompatible with church management. Cultivating both aspects is a necessity for effective service to God in accomplishing the mission and objectives of the church (Siu, 1999). Siu laid a biblical foundation to support these assertions. The ministries of Joseph, David, Ezra, and Nehemiah, and God's management of the Israelites in the desert as well as the management of the New Testament church, serve as examples of spirit-led management.

Leadership and church management are accompanied by various challenges. One challenge, identified by Lundholm-Eades (2005), is the misunderstood axiom that the church is timeless. While some aspects of church are timeless, such as Jesus Christ, his teachings, and worship, other aspects, such as the strategies that support the mission of the church, are not. Lundholm-Eades contended that the church should engage in continuous improvement, especially considering the changing environment within which the church operates.

The organizational performance and management of for-profit businesses has always received lots of attention. In the late 1970s and throughout the 1980s, some researchers began to study management issues as they concerned churches (Odom & Boxx, 1988). The research highlighted that church management issues were worthy of continued research. The same trend can be seen with technology. As technology, particularly IT and information systems, exploded in the 1990s, many researchers set out to explore its effect on every aspect of businesses. Researchers eventually began to study the role of IT and its effect on other types of organizations as well. As BI continues to

evolve and garner more attention, researchers began to explore its potential role in other types of organizations beyond traditional business organizations.

Information Technology Systems in the Church

Various forms and uses of IT are not unfamiliar in many churches. From websites, electronic check-in systems, and PowerPoint presentations to streaming video of previous sermons, churches of all sizes are finding many uses for technology to advance their ministries and reach more people. Church leaders are investing in technology that supports their infrastructure (Cone, 2005). Church organizations are embracing technology and find it valuable for operating ministries and aiding missionary objectives.

Despite the apparent value of IT to some churches, widespread adoption of technology may not be prevalent in the church environment. One reason may be because IT methodologies appropriate for large organizations may be incompatible with small voluntary organizations such as churches (Morgan, 1995). Moreover, Lockhead (1997) explained that although churches share many commonalities with other nonprofits, they possess unique strategies and missions that may affect their decision making regarding IT adoption. Therefore, churches may need to be considered entirely separate from other nonprofits regarding IT adoption.

Many uses exist for technology in the church. Church leaders have moved beyond using technology solely for accounting purposes and have begun using technology to support and enhance spiritual practice as well (Wyche, Hayes, Harvel, & Grinter, 2006). As mentioned above, technology uses include connecting with the laity in

ways never before utilized. Thus, as technology advances take place in the business and personal realms, church leaders find ways to utilize technology for the benefit of their organizations and in support of their missions.

Church leaders have realized that keeping pace with advances in technology is necessary for staying current with the younger generations. Jewell (2005) commented on this perspective, noting that a technology-oriented world requires a technology-oriented church to reach the current and future generations. Technology continues to progress quickly. Church organizations whose leaders embrace new technologies will be able to stay relevant with the congregations and community members they serve.

Communication in the Christian church is critical as it speaks to the common denominator of all Christian churches, which is the great commission to spread the gospel of Christ. Subsequent to this is all other communication for the purposes of running the church in support of the greater objective. Understanding that effective communication in the church is imperative, the medium used to communicate must be considered. The statement "the medium is the message," coined by McLuhan (as cited in Fenimore, 2001, p.1), illustrates how powerful the communication medium can be when conveying a message.

Accordingly, the medium used has social consequences. Examples include radio, television, and the Internet. Fenimore (2001) explained how radio allowed information to reach more people faster and how television added a visual component that increased effectiveness of the messages being communicated. The Internet allows substantially large amounts of information to be shared globally (Huang & Chang, 2009) and once

again made it possible to share information faster than ever before. Socially, the Internet has changed the way people behave, do business, and interact with one another (Franzen, 2000). In light of the potency of communication mediums, church leaders must adopt effective forms of IT within their organizations. The IT adopted should extend the current capabilities for communicating the gospel and disseminating other pertinent information.

Another aspect of church organization affected by IT is marketing. Some people may not think of marketing as an important or even necessary activity of churches. However, Vokurka, McDaniel, and Cooper (2002) noted that the marketing discipline as it relates to churches had been gaining attention. Marketing has several valuable uses for the church environment. For instance, marketing strategies can be used to reach certain niche groups for communicating a unique message. Marketing strategies can be used for advertising services available to members of the church and community and to attract new members for promoting church growth. Business intelligence solutions are known for helping to improve strategic decision making in all areas of business, including marketing. Consequently, marketing is another area where BI may be of value for churches.

Information technology use in the church appears to be growing. Megachurches have been fast adopters of new technology (Cone, 2005), yet leaders of smaller churches are finding ways to implement new technology within their resource constraints. In the past, church leaders have been reluctant to embrace technology because of the perceived tension and incompatibility between the secular associations with technology and the

spiritual nature of the church. Moreover, earlier research showed that nonprofits

routinely invested fewer resources into IT, mostly due to budget constraints (Sheh, as

cited in Finn, Maher, & Forster, 2006). Other characteristics that may affect the adoption

of IT include trained IT staff, management discretion, government funding, and donor

commitment. However, churches are now embracing new technologies more rapidly and

finding innovative uses for them in supporting church missions (Cone, 2005; Kelley,

2008). Church leaders are using IT to support day-to-day operations, communicate the

gospel in a more contemporary manner, stay relevant with the younger generations, and

increase the effectiveness of churches' marketing strategies. As a result, exploring the

potential role of BI in church organizations may be helpful for strategically managing

these various areas of church activities and functions.

Research Methods

The literature review conducted for the proposed research study yielded no results

specifically related to BI and church organizations or BI and nonprofit organizations. As

previously described, small churches can be similar to small businesses. In this area,

virtually no research was found in the academic research literature. However, there are

many concept and research articles in the industry literature. Websites such as

businessintelligence.com, beyenetwork.com, tdwi.org, and information-management.com

contain articles, white papers, blogs, podcasts, and so forth pertaining to the role of BI in

small businesses and how it is evolving.

The research provided on these websites is primarily based on survey research

with the data analyzed quantitatively. There are some case studies as well. For example,

Lock (2008) reported on research conducted by the Aberdeen Group. Researchers at the

Aberdeen Group examined 640 SMBs between February and April 2008. Data collection

methods included online surveys and telephone interviews. The purpose of the study was

to identify best practices for BI use among SMBs and to construct a framework that

leaders of SMBs could use to assess their own BI capabilities. The main findings of the

study revealed that 95% of SMB leaders were using or planned to use some form of BI.

Also, the findings noted the top business pressures that drive BI in SMBs as well as the

characteristics of the best-in-class companies that cause them to excel in BI management.

Because BI is a classification of the broader IT subject, it is reasonable and

appropriate to look at the research concerning general IT in nonprofit and church

organizations. Hackler and Saxton (2007) examined nonprofit organizations' technology

planning, acquisition, and implementation. The aim was to assess their strategic use of

IT and to determine how leaders of nonprofit organizations can optimize their use of IT

to fulfill the organizations' mission objectives. Hackler and Saxton assessed the

performance of nonprofit organizations based on six organizational competencies: (a) IT

planning; (b) IT budgeting, staffing, and training; (c) Internet and website capabilities and

use; (d) the measurement of IT effectiveness; (e) board support and involvement in IT

decision making; and (f) leaders' understanding of the strategic potential of IT. One key

insight gleaned from the study was that "nonprofit leaders especially need to obtain a

better overall appreciation of IT's full potential, along with a willingness and capacity to

more directly link the acquisition and utilization of IT to the organizational mission"

(Hackler & Saxton, 2007, p. 475).

The analysis for Hackler and Saxton (2007) was based on a survey conducted by Gifts In Kind International, the 2001 Technology Tracking Study of the Nonprofit Sector. The snowball sampling method used generated 1,572 responses representing a variety of service areas. According to Hackler and Saxton, survey research allows for larger sample comparisons and analysis of relationships. Hackler and Saxton used macro-level data and methods in their analysis for better generalizability as they wanted to look at the nonprofit sector as a whole.

Kelley (2008) noted the pervasiveness of technology use in daily lives and that Christians' use of technology is indistinguishable from the rest of the population. Furthermore, Kelley noted that Christians have been among the first to adapt to new technologies. As an example, Kelley cited the use of the Gutenberg printing press to mass-produce Bibles. In an analysis of the literature, Kelley described the historical use of technology in the church and its current uses in the church. Some churches use the Internet for outreach purposes, audiovisual technology is common at many churches, and contributions can be made electronically. Technology use is not limited to church services and is being used for missionary work as well. Church members use technology to communicate with missionaries in the field, to share resources, and to manage missionary projects. Another major use of technology in the church is for business purposes such as the running of the church. Uses for software include accounting, scheduling, and communications.

Heist (2011) conducted a quantitative non-experimental research study on the lack of strategic planning and business processes concerning IT in Christian church

organizations in the United States. More specifically, Heist used a cross-sectional survey

using simple random sampling, and the data analysis procedures included descriptive and

inferential statistics. The study showed a significant relationship existed between IT

management effectiveness and the four independent variables: IT business processes, IT

strategic planning, church weekly worship size, and the number of IT staff. Heist

concluded that improving the effectiveness of IT management may have positive social

change implications on church operations.

Finn et al. (2006) examined the indicators of IT adoption in the nonprofit sector.

The study covered the period between 2000 and 2004 and was based on archival data.

Self-assessment surveys were used in 2004 to report on the current state of information

and communication technology adoption in comparison to 2000. The same survey

instrument was used both times. Findings indicated that leaders of nonprofits have been

increasingly integrating information and communication technology into their

organizations. Moreover, findings illustrated an intersection exists between larger

budgets and staff, adoption of technology-enhancing administrative procedures, and

increased staff training.

Burch (2009) conducted a quantitative study investigating the effects of

organization leadership and membership characteristics on IT adoption in churches.

Using a survey, Burch collected data from 480 churches around the United States

concerning IT use in their organizations. Burch aimed to address the gap in literature in

regard to the lack of research conducted in the area of IT adoption and diffusion in church

organizations. Previous research showed a disparity between IT use in churches and IT

use in for-profit organizations as well as other types of nonprofit organizations. Burch's research indicated that the gap may be lessening. Also, Burch found that while Internet use is highly common in daily operations, the level of training and staff that requires IT skills is much lower. The underlying issue is that although church leaders are incorporating IT more than in the past, they are not taking full advantage of what IT has to offer.

From the literature reviewed, quantitative survey research was the most popular method of choice concerning IT in nonprofits and church-based organizations. The literature review yielded hardly any qualitative research related to the topic, yet a qualitative approach may still prove useful. Burch (2009) identified areas for further research and suggested that additional research can be valuable for identifying other variables of IT use that may be more indicative of IT adoption in churches. Thus, using interviews analyzed qualitatively may result in more insight into why churches may or may not adopt certain technologies, especially BI.

Summary

BI is one of the fastest growing segments in IT and information systems. Assessments of BI indicate that it is useful in all types of industries. Benefits of BI are numerous, but the general idea is that BI improves decision making, which results in improved organizational performance (Foody, 2009; Ranjan, 2008). Determining the value of BI in more detail has proved difficult. Traditional value assessments such as return on investment or net present value are at least somewhat helpful but ultimately

insufficient for evaluation (Elbashir et al., 2008; Hocevar & Jaklic, 2010). Therefore, a customized approach using various methods may be most appropriate.

Although BI is still relatively new and still growing, much research has been conducted concerning its benefits and use in for-profit organizations. At one time, BI implementation required a substantial investment of money, time, and other resources, which limited the kinds of organizations able to take advantage of the benefits of BI, mainly large organizations could spare the time and resources (Mikell, 2008). Meanwhile, smaller businesses face fierce competition and need competitive advantages that the use of BI can help create (Canes, 2009). Due to globalization and other technology advances, leaders of smaller businesses are finding themselves in direct competition with larger businesses (Canes, 2009). Therefore, vendors have made available BI solutions that do not require a substantial capital investment, can be implemented in a considerably shorter time frame, and still provide the same benefits as larger complex BI solutions.

Noticeably absent in the literature is the role and benefit of BI, if any, to nonprofit organizations. Business intelligence in small businesses was a topic addressed in the literature review because small businesses share a lot in common with small nonprofit organizations. The shared traits include size, organizational structure, and limited resources. Research showed that leaders of SMBs are embracing BI and finding ways to implement it in their organizations (Lock, 2008). Notwithstanding the similarities between small businesses and small nonprofits such as churches, it is evident that

churches are unique organizations with unique missions, objectives, and values. Hence, churches may face issues concerning BI that are exclusive to their environment.

Because of the lack of literature pertaining to BI in nonprofits or churches specifically, the literature review included literature on the use of IT as a whole in churches, which was appropriate because BI is a type of IT. The research attested to a general acceptance of technology in the church environment (Cone, 2005; Jewell, 2005; Wyche et al., 2006). From presenting sermons, reaching out to members, and creating websites to accounting and operational activities, technology has found a place in churches. However, there is clearly room for evolution in how church leaders exploit technology for their purposes. More research is necessary to explore the factors that affect IT adoption, justification for IT investment, and how churches can achieve more with the use of IT.

Chapter 3: Research Method

Research Methods and Designs

This section includes a description of the research design and research questions. The study was an exploratory, descriptive, and contextual qualitative study of the perceptions of pastoral leaders concerning the potential benefits of utilizing BI in church organizations and to determine if BI has value for church organizations, specifically in minority neighborhoods in Los Angeles, CA, with largely African American congregations. The selected research design was appropriate because the design allows flexibility in the collection of data (Yin, 2003). A qualitative phenomenological study was the appropriate methodology and design for the research study.

The primary research questions for the research were as follows:

1. What is the current role of IT in the church organizations?

2. What is the potential usefulness of BI in church organizations?

3. What potential conflicts, if any, might exist between spiritual and BI management objects?

Qualitative research is a method of gathering information that does not use statistical procedure or means of quantification (Strauss & Corbin, 1990). The purpose of qualitative research is to describe, interpret, verify, and evaluate (Leedy & Ormrod, 2010); as such, researchers of qualitative studies seek to gain an in-depth understanding of what others do or say through collecting and analyzing words, whether in the form of speech or writing (Clissett, 2008, p. 100). Qualitative research is appropriate when little is known about the topic, when the researcher is not sure of the variables, and when the

theory base is not fully developed. Given the lack of extensive research regarding perceptions of pastoral leaders with the potential benefits of utilizing BI in church organizations, a qualitative research method was appropriate for this study. Those who conduct quantitative research focus on measuring the parts in an issue, whereas qualitative researchers seek to create a picture that covers the whole image (Thomson, 2008). Quantitative researchers focus on using specific definitions, operationalizing what particular concepts and variables mean, and focusing on numerical descriptions of things and their relationships, whereas qualitative researchers focus on interpretation through looking at contexts, environmental immersions, and a depth of understanding of concepts to be able to provide complete views (Tewksbury, 2009).

Both qualitative research and quantitative research require permission to begin a study, but qualitative research requires greater access to the site, as the researcher typically goes to the site to conduct interviews. Although researchers of both qualitative and quantitative research methods can gather data through surveys, the challenge with qualitative data collection is being able to see the obvious actions involved and to be able to look beyond the obvious and see those things that might always be present but are taken for granted and that observers typically fail to note (Tewksbury, 2009). Data gathering in qualitative designs usually involves on-site interviews and a more involved communication process compared to data-gathering processes employed in quantitative studies. Because qualitative methods centralize and place primary value on complete understandings, and how people understand, experience, and operate within dynamic and social environments in foundation and structure (Tewksbury, 2009), a qualitative research

design was appropriate for this study, as it entailed analyzing pastoral leaders' experiences and perceptions.

Quantitative research methods would not have been useful for the study, because they include a predictive process rather than perception and reflection to define and measure relevant data. To gather empirical data, quantitative researchers use a formal instrument that results in statistical analysis and in results extrapolated to a general conclusion. Quantitative methods lack the subjective and narrative approach needed to elicit experiences and perceptions from study participants through interviews, where the collected interview data are richer than quantitative data in that not only do researchers learn how the interview subjects see and know something, but the researchers obtain an explanation of that observation or knowledge (Tewksbury, 2009). Qualitative research is often appropriate for policy and program evaluation research because it can answer certain important questions more efficiently and effectively than quantitative approaches.

Phenomenology

Specifically, the qualitative study included a phenomenological design. According to Leedy and Ormrod (2010), the aim of a phenomenological study is to determine the structure of experience as described by the participants, which is in line with the objectives of the current study. Phenomenology is the attempt to understand a situation from those who live in the situation or to identify the essence of human experiences of a phenomenon (Leedy & Ormrod, 2010). The phenomenological approach does not begin with preexisting theories or test hypotheses, and it does not explain human experience in relation to different variables or predictors, but rather, it

aims to describe the experience under investigation (Leedy & Ormrod, 2010), including the models of apprehension and significance of lived situations. As with qualitative research methods, the approach relies on general interviews to restrict the views of participants, and as such, the study included the use of open-ended questions to interview the sample.

Population and Sampling

The population of the study was from church organizations with a largely African American congregation and located in minority neighborhoods in Los Angeles. The participants of the study included 20 pastoral leaders from the population. Participants were chosen using a combination of purposive and referral sampling and were chosen because they make the final decisions concerning not only spiritual matters but business matters of their organizations as well.

Qualitative research normally involves a small sample size of participants. Creswell (2005) recommended that the size of a qualitative sample should range from 1 to 25 participants, and Polkinghome (2005) suggested that qualitative research include sample sizes of 5 to 25 participants. Patton (2002) noted that there are no specific rules for sample sizes in qualitative research and "sample size depends on what you want to know, the purpose of the inquiry, what's at stake, what will be useful, what will have credibility, and what can be done with available time and resources" (p. 244). Seidman (2006) contended that when interview participants share similar structural and social conditions, it gives "enormous power to the stories of a relatively few participants" (p. 55). In the study, the pastoral leaders pastored churches that shared commonalties in

their structure (e.g., small or midsize) and in their social conditions (e.g., located in minority neighborhoods and had predominantly African American congregations). Therefore, a small sample of 20 participants was sufficient. The primary data collection was through semistructured in-depth interviews and any necessary follow-up interviews.

Materials/Instruments

For this study, the primary instruments used for the collection of data were semistructured interview questions. The interview involved administering a predetermined set of interview questions to the selected participants. Follow-up, probing, and specifying questions, among other types, served to draw out more information from the participants. In qualitative studies, the researcher is the primary instrument (Patton, 2002). When conducting interviews, the researcher needs the necessary skills to be effective, which include asking the appropriate questions, asking follow-up questions that yield additional information, and creating an environment where the participants are comfortable. To prepare for the interview sessions, the researcher read materials about good interviewing skills and practiced some of the suggestions.

An interview guide was prepared, with primarily open-ended and a few closed-ended questions to encourage participants to give elaborate and detailed responses. The study employed macrostructures to formulate the interview questions based on the three-interview series developed by Dolbeare and Schuman (as cited in Seidman, 2006) and proposed by Seidman. The process involves three separate interviews with each participant spaced at least 3 days apart. The first interview is a focused life history that provides a foundational context on which to draw an enhanced understanding of the

participants and their experience or perception with the phenomenon. The second

interview designed to reveal the details of the experience or perception. The focus of the

third interview is reflection. In the third interview, participants reflect on the meaning of

their experiences and perceptions. Because of the total number of participants used in the

study, I maintained the three-interview structure of life history, details of the perception

under study, and reflections, but they were conducted in one main interview with follow-

up interviews as necessary. Seidman suggested conducting separate interviews to cover

each topic but separate interviews are not necessary to obtain detailed and sufficient

information.

I remained the primary instrument and framed the discussion based on the

prepared research questions. I conducted a pilot test to test the appropriateness of the

prepared interview guide questions using four handpicked participants. The opinions and

results of the pilot study follow in this chapter.

Semistructured Interviews

A semistructured interview is a flexible method used to gather research when the

researcher has a general framework of themes to be discussed and has prepared questions

as a guideline for the interview. Researchers often group topics together and can ask the

participants questions in different ways based on interactions and rapport with the

participants (Lindlof & Taylor, 2002). Having a detailed interview guide with some

preselected questions will increase the likelihood of covering all the key topics.

During a semistructured interview, a researcher has a set of questions to ask the

participant, but will be guided by the interview to ask additional questions. To obtain

meaningful data, the researcher must establish a good relationship with the participant. The order in which the questions are asked is not important. The researcher may follow areas of interest or concern that the participant brings up. Participants are seen as the experts on the subject and are allowed to tell their story fully, which allows for the researcher to "enter novel areas" (Smith, Harre, & van Langenhove, 1995, p. 12) and often produces rich data.

Semistructured interviews aim to give readers a detailed account of beliefs or perceptions regarding a particular topic. Using semistructured interviews provides the ability to follow up with new areas that emerge and allows for the participant to provide a fuller picture. Some of the drawbacks to the method include the researcher having less control over the interview and longer interviews than other methods that can be difficult to analyze (Smith et al., 1995).

The study included 11 questions, with follow-up questions to be asked as needed. It was essential for the researcher to have the flexibility to ask follow-up questions to clarify and expand on the topics pertinent to the research. In summary, the interview questions were specifically focused to extract whether and how the participants perceived the benefits of BI on their churches, on the church in general, or if BI poses issues with the church. Lastly, possible scenarios such as whether BI is or is not beneficial to the church were asked about.

Data Collection and Processing

Important considerations of the data collection phase of the study include the procedures for finding the participants for the sample, obtaining informed consent for the

participants to take or engage in interviews, and clarifying the specifics of the parameters under which the interviews or surveys took place. The interviews were scheduled based on the availability of the selected participants. The interviews were conducted privately and face-to-face. Participants were met in an agreed-upon location such as their church or other convenient locations.

The aim of the study was explained to the participants, and they were asked if they have any questions regarding the study. The participants were told they are free to answer a question and they were free to not answer questions if they were uncomfortable. The interviews lasted between 15 minutes and 45 minutes. Each participant received my contact information, and results from the study were shared via an executive summary e-mailed to the participants.

Collecting data through interviews provided a deeper understanding of the thoughts of the experiences and perceptions of pastoral leaders in minority communities in Los Angeles, concerning the potential benefits of utilizing BI in church organizations and to determine if BI has value for church organizations. Interviews enable researchers to understand a phenomenon from the point of view of the participants (Groenewald, 2004).

The study included open-ended interviews to collect data, which permitted participants the opportunity to express their thoughts without constrains (Patton, 2002). Open-ended questions allow participants to act spontaneously in communicating their experiences to a researcher (Brunelle, Cousineau, & Brochu, 2005). In this study, the in-depth interviews included an interview guide. The interview script contained both open-

and closed-ended questions. Closed-ended questions are those that do not permit respondents to explain further. Open-ended questions are questions that allow respondents to give a detailed response through explanations and elaborations. Open-ended questions enabled me to gain rich information necessary to answer the research questions.

There are four main steps to conducting an in-depth interview. The first step is planning how to conduct the interviews. This study involved individual interviews conducted with each participant, and the researcher was able to focus on the experience of each individual.

The second step involves choosing the participants. In this study, the participants were pastoral leaders in minority neighborhoods in Los Angeles. Twenty participants were selected for interviews, as this number is normally sufficient to reach data saturation. Data saturation occurs when no new or significant information would be uncovered by adding additional participants to the study (Creswell, 2005). The data provided by the 20 selected participants were sufficient to reach data saturation and no additional participants were necessary.

The third step is creating the interview script. The interview script included suitable questions that would help to achieve the objectives of the study (see Appendix A). Questions were framed appropriately to extract sufficient information and to address each research question (see Appendix B). Open-ended questions are most suitable for an in-depth interview because they generally result in more detailed responses (Leedy & Ormrod, 2005). Also, an interview guide was used to ensure the appropriate activities

take place before, during, and after the interview (see Appendix C). Prior to the actual interview, each participant received an invitation letter describing the purpose of the interview, why the research is necessary, and the implications of the study (see Appendix D).

The last step is conducting the actual interviews with the selected participants in an arranged setting (Belk, 2006). The interview sessions were recorded with the participants' consent. The recordings were transcribed for the analysis of data. Then, the data were analyzed using coding.

Data Analysis

I loaded and analyzed the data with NVivo 10 software. I then generated invariant constituents and thematic codes using the modified Van Kaam method (Moustakas, 1994). Coding participants' responses involved creating a node for each separate theme or idea. The first pass of coding involved blocks or passages of selected text within each interview question creating a node for each unit of meaning or specific idea. All statements that added context to the idea were carefully retained.

I then clustered the nodes into sets of similar ideas and eliminated any units of meaning that were redundant, irrelevant to the research questions or specific interview question, or uninterpretable. I created clusters of ideas in which each of the ideas in the nodes and sets with the raw data were summarized and identified by participant code to run tabulations without redundancy. Invariant constituents resulted from the created nodes and sets. Themes were generated in which I organized invariant constituents. The clusters that had a sufficient number of ideas and ideas that related enough to one another

became themes. From the clusters, I identified central meanings from the responses and interpreted the perceptions of the participants concerning the phenomenon under study.

Pilot Study

Conducting a pilot study helped to ensure the appropriateness of the interview questions. The interviews had a three-part structure: focused life history, details of the perception under study, and reflection on the potential implications of the perception under study. Findings are discussed based on the structure of the interview to help provide a complete picture of the perceptions of the pastoral leaders and the context in which they exist. Additionally, demographic and background information is reported.

Focused Life History

The first part of the interview served to gain insight into the pastoral experience with some emphasis on how and why the participants became pastoral leaders. Table 1 shows the invariant constituents identified from the topic of how the participants became pastors. The results indicated that the pastors believed they received a calling to be a pastor at an early age. They spent a lot of time being active in the church and pursued formal religious education.

Table 1

Pilot Study: How the Participants Became Pastors

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
I received a calling at an early age	3	75
Deeply involved in church before deciding to become minister/pastor	2	50
I pursued pastoral studies after receiving undergraduate degree in English	1	25

The participants described their experiences concerning being a pastor and managing spiritual matters as well as administrative and financial issues. Two participants (50%) noted that the financial management of the church is a struggle. Two participants noted that they tend to be more hands-on with spiritual matters and delegate the administrative and financial matters to others.

According to Pilot Participant 3,

My philosophy as a leader is to, as the pastor, is to make sure my mind is clear to devote time to prayer and Bible study preparation and sermon preparation so that the sheep are fed on a weekly basis, on Sundays and Thursdays. And so I firmly believe in the delegation of church work and so I developed a Finance Committee and a Budget and Audit Committee that basically tends to the financial needs of the church and they report to me weekly by e-mail. And the administrative needs of the church are managed by the church administrator, who manages the day-to-day operations of the church and reports to me weekly by e-mail. And then once a month we do a staff meeting.

Understanding the goals and missions of the church was important for establishing a basis for understanding how technology, and specifically BI, may be helpful in achieving these objectives. This information was included in Part 1 of the interview to help establish the context for subsequent questions concerning the use of technology, and the potential usefulness of BI, in church organizations. Table 2 shows the 10 invariant constituents identified when the participants were describing the goals and missions of their church. According to the literature, churches have objectives that include serving the needs of the community through outreach programs (Lelon, 2003; Niemandt, 2010) in addition to their own congregation. The participants' responses supported this idea.

Table 2

Pilot Study: Goals and Missions of the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Outreach, to grow church	2	50
Create a spiritual environment, with love and unity	2	50
Counseling, mental health services	2	50
Evangelism, bring the word of God to others	2	50
Work with those aspiring to higher education	1	25
Food services	1	25
Try to bring more men into the church, keep them engaged	1	25
Eventually start a nonprofit community development program with wraparound services	1	25
Financial literacy programs	1	25
Extend a women's technology program beyond the church	1	25

Details of the Perception Under Study

Part 2 of the interview was broken down into two sections. The first section dealt

with behavior. It was designed to explore how technology is currently being used in the

church. The second section dealt with values, opinions, and beliefs concerning how the

concepts of BI may be useful for a church organization. The findings indicated that

technology is currently being used in the church for three main purposes:

communications (disseminating information), sermon preparation and delivery, and

financial management of the church (see Table 3). All four participants (100%)

mentioned the use of social networking sites to communicate with the public and

disseminate information.

Table 3

Pilot Study: Uses of Technology in the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Communications—through church website, social networking sites such as Facebook, Twitter, and e-mail blasts	4	100
Use for financial bookkeeping	2	50
Projection of sermons, such as PowerPoint	2	50
Use for conferencing (IPads, BlackBerrys)	1	25
Use Google for searches, to import images, to gain knowledge and spiritual inspiration	1	25
Use Bible software for research and data to help prepare sermons	1	25

Although the pastors are leaders of their churches, other staff are involved in the

decision-making process when it comes to the selection and implementation of

technology for the church. Three participants (75%) stated that purchase decisions go

through a board approval process. However, pastors still influence the decision making

and two participants explicitly stated that they have the final say on purchasing decisions.

The pilot participants perceived several benefits of technology use in the church

(see Table 4). The responses pointed to benefits related to costs savings,

communications, and marketing. Each participant perceived some kind of benefit

concerning technology use in the church.

Table 4

Pilot Study: Benefits of Technology Use in the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Facilitates communication	1	25
Saves staff time	1	25
Cuts down on printing costs	1	25
Accountability, credibility; there's a record of all donations, expenditures, etc.	1	25
Help to get the word out, marketing, outreach	1	25
Using technology for financial recordkeeping helps with security as opposed to having paper records	1	25
PowerPoints help ministers and congregants retain information from sermons	1	25

One of the core concepts of BI is that it is valuable because it provides actionable

information organizational leaders can use to make better decisions. According to

Callender and Danzing (2007), BI initiatives that focus on the information that influences

decisions and their outcomes can significantly improve performance. Additionally,

Callender and Danzing explained that BI initiatives must therefore begin with asking

about the information needs of users. To assess the values, beliefs, and opinions of the

participants concerning the potential usefulness of BI in churches, the pastors were asked about what information they believed would be useful to make better decisions for their churches and how they believed their churches would improve based on having better information.

The findings indicated that having a database and tracking information about members and visitors would be helpful to satisfy information needs. Two participants stated that they believed a database that housed member information would be useful. Other informational needs mentioned were being able to track visitors and having access to demographics of the local community. Tracking information about members, visitors, and the surrounding community would help pastoral leaders identify and address the needs of the community. Pilot Participant 4 stated,

> I would like to be able to possibly—when you put—like get a new member and get all members, and you put the information in, try to create like a map, or how far they're coming to church. What's the demographics? Where do they live? To see, you know, and then I—what type of education they have, and then, we can kind of create programs that's going to meet that need. So, right now, you kind of, when you're broadcasting, you kind of put it out there so a little bit of everybody, but if you have more information and more things that would streamline it, then you could better serve the people.

Furthermore, the participants expressed that having better information would benefit the church by staying integrated with community, communicating to the masses, and allowing churches to create tailored programs that address members' needs. Pilot

Participant 2 explained that having better information would allow him to delegate work

appropriately and share information among various departments:

> But having information in front of them and them knowing directly what the
>
> people they're dealing with, because you may have someone who loves to deal
>
> with seniors, you may have someone that says my specialty is dealing with youth,
>
> and I just—youth—well, my specialty's dealing with young men, or my
>
> specialty's dealing with young ladies, or my specialty's dealing with. . . . They,
>
> the people have passions, and information gives you an understanding of how to
>
> follow that passion. So I think if we had that, it would make our life much easier.
>
> Instead of me having to mail everything to anyone, I could say, okay, punch in
>
> this code, access this information, and this is to—this is what you're going to do
>
> with it. So all of our youth leaders would have access to the database to find out
>
> information for the youth. Our women's department would have the information.
>
> The men's department would have the information. The leaders, the ministers at
>
> large, would have the information. So we become an information-based church.

All four pilot participants expressed interest in using a BI system for the church

that would allow them to capture and use the information they said would be useful to

them. Pilot Participant 1 stated, "I'd welcome it. It would make us more efficient in what

we do." Pilot Participant 3 stated,

> If it was a business intelligence system that allows us to simplify what we do, or a
>
> one stop shop, certainly. Finance management, contribution donations, updating

applications, any of those things that are going to contribute to the life of the

church administratively, I would certainly purchase it.

Despite the overall interest in a BI system for the church, cost of the system was

expressed as a possible prohibiting factor to implementing a BI system.

Reflection

In the third part of the interview, the participants reflected on the use of

technology in the church and on whether or not BI for church management poses a

conflict of interest with achieving the spiritual mission of the church. The overall

perception of the use of technology was a positive one among the pilot participants.

Three participants noted that they were very much in favor of technology in the church.

Table 5 shows the invariant constituents derived from this topic.

The findings indicate that the pastors not only support the use of technology in the

church but they encourage their members to use it in the church. Pilot Participant 3

stated,

> I support it. Some of my counterparts don't support it. I promote that everyone
>
> that has an iPad or a phone download YouVersion to your phone and read your
>
> bible in church. So you may not be bringing your physical bible with you, but it's
>
> on your phone, I support that. I encourage it. I encourage using social media
>
> during worship to captivate those moments and those thoughts as a tool of
>
> evangelism. If there's been something that's been said, Tweet it, Facebook it.
>
> Also, I encourage them to bring iPads into church and to take notes.

Table 5

Pilot Study: Feelings About the Use of Technology in the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Very much in favor of technology in the church	3	75
Have to keep up with the way the world works	3	75
Technology helps to access information and research, gives choices about what to seek and read	2	50
Not having control over what is on the Internet can be a drawback	1	25
Not a cure-all but it is an important priority, value added	1	25
Spiritual enrichment is the first priority, technology cannot counsel you	1	25
Some do not support it; it is an old school cultural thing, think the Word is sacred and should only be printed	1	25
Technology is critical, it keeps the ministry running	1	25
Technology has been a gift. How we use technology is what can be devastating to us.	1	25
Churches are streaming services for those who cannot attend, it helps gets the word out	1	25

According to Pilot Participant 4, there is a need to keep up with current

technology trends: "We have to meet the world, you know? Oftentimes, church is so far

behind that people lose interest." Pilot Participant 1 expounded on the benefit that

technology provides in terms of reaching the masses:

> I'm not against it. I am for it. I know that a lot of the megachurches, they're
>
> broadcasting or they're video—they're streaming is the word I think—streaming
>
> their services. So not only . . . for . . . those that are in house that can see two

screens, but they're streaming live all over the world. And so some people nowadays are sick and shut in, can't get out. And because of this age, technology age, now they can get some church in there. Now they can get some fresh word which provides hope, which provides intelligence, which provides everything that we can get from the church. And so I am for the advancement of technology in the church. I am all for it. I mean, because that's what this generation requires now.

The spiritual objectives of the church make for a unique operating environment (Cone, 2005). As pastoral leaders, when gathering information and making decisions, there is a spiritual element at work due to the nature of their position within the church. Thus, I sought to gain an understanding on how the spiritual aspects of managing the church are handled in concert with using technology. Two participants responded that spiritual and business matters cannot be separate. Technology was deemed as being very useful for managing the church.

Two participants expressed the need for churches to operate like a business. The participants seemed to perceive that technology such as BI can be used for the church without compromising the spiritual integrity of their churches. Moreover, technology is seen as a complement to the spiritual element of running the church. When discussing how decision making for the church is handled, Pilot Participant 3 stated,

Spiritually, it's through prayer after assessing the congregation of where the church is. On the business aspect, what's best for the business life of the church financially, programmatic wise, what's best in those areas, which then I use

technology and I research on those subjects as I make my decision. I just don't

solely say it's the Lord, per say.

Background and Demographics

The four pilot participants, all male, ranged in age from 32 to 50 years old. Each

participant had some form of formal religious education. The leadership style of the

participants varied. Two participants mentioned that they lead by example. Other

characteristics of leadership expressed by the participants included mentorship,

empowering people, coaching, heavy on teaching, and visionary. Furthermore, each

participant expressed that his leadership style was the same, or mostly the same, for

spiritual, administrative, and financial management of the church.

Pilot Study: Identified Themes by Research Question

The pilot study was conducted to test the suitability of the interview questions for

answering the research questions. The pilot study yielded several themes that supported

the research questions. The themes are presented according to each research question.

Research Question 1: What is the current role of IT in church organizations?

Three themes were identified supporting the first research question. Table 6 includes

these themes, along with participants' supporting statements. The findings indicated that

IT is being used for communications, preparing and delivering sermons, gathering

information to support sermons, and evangelism. Pastoral leaders use e-mail, text

messaging, and social media to disseminate information to their members and to the

public. Bible software, iPads, and search engines are used to help pastoral leaders prepare

their sermons. Also, social media such as Facebook and Twitter are used for evangelism.

For example, members tweet quotes from the sermon during church services.

Table 6

Pilot Study: Identified Themes Supporting Research Question 1

Theme	Participants' supporting statements
Technology helps to facilitate communication between church, members, and the public	Computer technology has been—computer data has been just vital. Information technology, of course, across the board every ministry is really computer based in terms of disseminating informations to our parishioners, to our congregation. . . . Our plan is to go overhead projection. And some of them is e-mail. We even use a social media network now to communicate upcoming events, to just let our member, whether they're in California or out of California, know where the church is, what we're doing, and what we've been doing. Of course, any—like any other church we've got people outside of the state. So we try to communicate with them via social media.
	We'll use social media, Facebook. So when we need to get things out, it used to be where you just called someone and said we're doing this, or you had flyers, or you had the old drudgery cards. And you carried along things. Your pocket was indented with 100 cards. Now what we do is use a lot of social media, so we use Facebook. We'll use Twitter.
	We have implemented in this church, communication through Facebook, text message, meetings by way of Skype and ooVoo and Twitter. We have used all of those mechanisms in the church. We do not pay for printing and we use our website. But we print no papers, no flyers. Everything is able to be discussed and disseminated by those avenues. Text message, Facebook, Twitter, Skype, and ooVoo and Evite e-mail system.
	So, when we're talking about information technology, we're talking about Internet, and are we—our church has a website that we try to keep current, you know? We have Facebook, and a Twitter account, and social media. We do e-mail blasts. We do text messaging, things like that, to information technology.
Technology facilitates research and information on spiritual matters and sermons	We will import information, use pictures and so forth; and then we're teaching our young people. We're working on a project, but who are you? And so one of the things we ask them to do is Google. Go search for who you are, then come back and present it to us because the scripture declares that we turn our church in the way they should go.
	I kind of think they go hand-in-hand. The more information you get—this is my belief. Something comes up in your spirit, something comes up, you know, in you spiritually in your mind, in your spirit, or whatever you want to call it, that's going to be beneficial to the church. Now, because it came from my spirit doesn't mean that all the answers just drop out the sky. I have to research things and I have to, you know, I Google or whatever it is, you know? You've got to research so that you can, the Bible says, "Write the vision and make it plain." And so, it's no use in you just saying, "Okay, this is the vision," but no instructions after that. And so, you get your instruction through technology.
Technology can be a tool for evangelism	I support it. Some of my counterparts don't support it. I promote that everyone that has an iPad or a phone download YouVersion to your phone and read your bible in church. So you may not be bringing your physical bible with you, but it's on your phone, I support that. I encourage it. I encourage using social media during worship to captivate those moments and those thoughts as a tool of evangelism. If there's been something that's been said, Tweet it, Facebook it. Also, I encourage them to bring iPads into church and to take notes.
	It's benefited because it helps us to, you know, in the church we call it evangelize; in the world, they call it market. And so, it helps us market. It helps us get the information out.

Research Question 2: What is the potential usefulness of BI in church organizations? One theme was identified for the second research question (see Table 7). Having access to a member database was perceived as being useful for the church. A database would allow pastors to track various information about members as well as visitors. It would centralize the information and facilitate information sharing among the various departments within the church.

Table 7

Pilot Study: Identified Themes Supporting Research Question 2

Theme	Participants' supporting statements
Having access to a member database would allow better program management and planning	I think having a database. We don't have that yet. A tracking device, when members join, when baptisms, because right now you have those in books. But having a database—what I would like is to have a database where we can track a lot of our information, and I can say, okay, how many members live in this particular zip code? How many senior citizens do we have, who—which members are disabled? . . . to me would be a value at because instead of me going through a lot of paper, I can look through one printout, punch in a code, and then it will give me all the information I need to be more communicative or more integrated in the community.
	But having information in front of them and them knowing directly what the people they're dealing with, because you may have someone who loves to deal with seniors. You may have someone that says my specialty is dealing with youth. And I just, youth, well, my specialty's dealing with young men, or my specialty's dealing with young ladies, or my specialty's dealing with loud-mouth girls. They—the people have passions, and information gives you an understanding of how to follow that passion. So I think if we had that, it would make our life much easier. Instead of me having to mail everything to anyone, I could say, okay, punch in this code, access this information, and this is to—this is what you're going to do with it. So all of our youth leaders would have access to the database to find out information for the youth. Our women's department would have the information. The men's department would have the information. The leaders, the ministers at large would have the information, so we become an information-based church.
	I would like to be able to possibly, when you put, like get a new member and get all members, and you put the information in, try to create like a map, or how far they're coming to church. What's the demographics? Where do they live? To see, you know, and then I, what type of education they have, and then, we can kind of create programs that's going to meet that need. So, right now, you kind of, when you're broadcasting, you kind of put it out there so a little bit of everybody, but if you have more information and more things that would streamline it, then you could better serve the people.

Research Question 3: What potential conflicts, if any, might exist between spiritual and BI management objectives? Four themes were identified for the third research question (see Table 8). The participants had a positive perception of BI and did not perceive any conflicts of interest between BI for church management and achieving the spiritual mission of the church. Spiritual and business matters were perceived as being intertwined. Technology was necessary to stay current and reach more people. The findings showed that pastoral leaders tend to be more hands-on with the spiritual matters and delegate the administrative matters to staff, which may help account for the perception of no conflict of interest concerning managing BI for the church and spiritual matters. Despite the positive perception of BI for church management, cost may be a prohibiting factor due to lack of finances.

Based on the results of the pilot study, the interview questions were appropriate for yielding sufficient data to answer the research questions. Several themes emerged from the interview data that supported the research questions. The proposed interview questions were used in the main study in addition to follow-up and probing questions to garner in-depth responses.

Table 8

Pilot Study: Identified Themes Supporting Research Question 3

Theme	Participants' supporting statements
Spiritual and business matters cannot be separate; church has to be run like a business, but spiritual mission comes first	I mean, are we always governed by the dollars and the cents or are we governed by the principles in which we teach out of God's word, out of the word of the Lord? And I'm from the school that I think that the word of the Lord should rule every time. However, we have a strong people that have a presence that the dollar rules. And so those things again, it goes back to responsibility.
	If [business intelligence solutions] were affordable, then I could see because I said we had an IT person on our team. I could see us making that purchase and making reasonable payments toward attainment because we see the investment. We have a tough team, and I hand selected the Board of Directors that way to say what are the needs. So our immediate need is always to make sure we have a place to go and worship. That supersedes everything.
	The day-to-day affairs of the church must be controlled and function as a business. What we do on Sunday is ministry. What we do Monday through Friday is ministry, but when it comes to the finances and information, that is business. We must have good business practices and so we have to utilize in the changing of the times, which has become very technologically savvy, we have to be able to have an adequate system that reaches everybody and simplifies what we do.
Finances may hamper church's ability to provide all desired services and programs	But you have—most of your congregants may be on a fixed income. So the fact that they're on a fixed income, it affects your ability to do the type of quantitative things you want to do. You could do a lot of qualitative things, but quantitatively it's difficult to really meet your end goals when you don't have the financial wherewithal to do that.
	Many challenges will become personality conflicts, disagreements on a variety of projects, Finance Committee has to work in concert with Church Administration and Ministries. And so one of the things we struggle with sometimes is conservative management of church finances versus a liberal church program. …the financial piece, conservative spending versus liberal programming.
Pastors tend to deal directly with spiritual matters but delegate administrative matters; business decisions are made through Boards	My philosophy as a leader is to, as the pastor, is to make sure my mind is clear to devote time to prayer and Bible study preparation, and sermon preparation so that the sheep are fed on a weekly basis, on Sundays and Thursdays. And so I firmly believe in the delegation of church work and so I developed a Finance Committee and a Budget and Audit Committee that basically tends to the financial needs of the church and they report to me weekly by e-mail. And the administrative needs of the church are managed by the church administrator, who also manages the day-to-day operations of the church and reports to me weekly by email. And then once a month we do a staff meeting.
	We have a formal board…an enclosed board that we run things by, and we talk things over. And we were considering some new software just as recent as last week, but it is board decisions.
	We have a Board of Directors; so generally, if we're going to make a purchase, I'll say to the Board of Directors why I want something. And what I really love about the Board of Directors although two thirds of our Board of Directors are family members, all of them have aspired to higher learning; masters, doctorates. So when I'm having that type of discussion, I can intellectualize a purchase.
Churches must keep up with the world technologically	And because of this age, technology age, now they can get some church in there. Now they can get some fresh word which provides hope, which provides intelligence, which provides everything that we can get from the church. And so I am for the advancement of technology in the church. I am all for it. I mean, because that's what this generation requires now.
	It's a cultural thing. Old school versus new school. Old school, become set, comfortable, believe that there's only one Bible and that's the printed Word and that's what should be brought into the church versus they may believe that technology seems to be not sacred and disrespectful. I tend to disagree with that. The Word is the Word, whether it's in your phone or in that printed book. And in this new age, we have to be able to adjust in order to reach those who are even new to the church.

Issues of Trustworthiness

Issues of trustworthiness in a qualitative research study are critical considerations. Trustworthiness, which is the counterpart to reliability and validity in quantitative studies, can be addressed using various strategies. Some of these strategies include reflexivity, triangulation, detailed description of the data, and audit trails. Reflexivity requires that the researcher first acknowledges his or her personal beliefs and attitudes concerning the topic and then consider how it affects the research (Roberts, Priest, & Traynor, 2006; Snow, 2009). In this way, potential bias and its effects on the research are clearly addressed. Triangulation refers to the combination of two or more data sources or methods for the purpose of enhancing the validity of the research (Roberts et al., 2006). Triangulation helps to add robustness to the study because the use of two or more methods allows for greater stability and consistency in the research. Providing a detailed and in-depth description of the data further helps to establish trustworthiness. Rich descriptions of the data include verbatim statements from interview transcripts to help illustrate how meaning was interpreted from participant responses. Finally, establishing a good audit trail provides clear evidence to support the researcher's findings and provides the trail for an independent researcher to follow and produce similar results, which enhances the reliability of the research.

Other strategies enhance the trustworthiness of a research study. The aforementioned strategies are just a few examples. The goal of establishing trustworthiness is to show that due diligence has been performed in planning, executing, and reporting the results of the research study (Williams & Morrow, 2009). I employed

strategies to establish trustworthiness for this qualitative study; Chapter 4 contains descriptions of the specific strategies used.

Ethical Assurances

Prior to the data collection process, the approval of the Walden University Institutional Review Board was secured (04-10-12-0077896). The Institutional Review Board protects the interest and integrity of the prospective participants in research studies. To protect the privacy of the participants, the tape recordings and the interview transcripts will remain on my password-protected computer for 5 years. Each tape recording and transcript received unique numbers to represent the names of the participants. The real names and contact information of the participants did not appear in any of the tape recordings or interview transcript files. The assigned unique numbers and the corresponding real names will remain in an electronic file to which the researcher has the only access. Furthermore, there is a signed confidentiality agreement between the researcher and the professional transcriber used to transcribe the recordings.

Prior to the interview process, each participant received an informed consent form (see Appendix E). The informed consent form contained a brief description of the study, potential risks involved, terms regarding confidentiality, and my contact information. The choice to withdraw at any time during the study was emphasized. None of the participants in the study revealed information deemed dangerous to the safety of other people in the workplace. A participant could withdraw from the study by contacting the researcher to be removed from the sample. During the study, no participant chose to

withdraw. I explained briefly the content of the informed consent forms; the participant then signed the consent form.

Possible risks were considered in conducting the research study. I deemed any psychological, economic or professional, or physical risks minimal. There were no foreseeable risks beyond those ordinarily encountered in daily life. The researcher did not use vulnerable participants for this study, and the research procedures did not reveal any type of criminal activity that necessitated reporting. Likewise, the research procedures did not reveal or create an acute psychological state that necessitates referral. No potential conflicts of interest existed in conducting the study.

Summary

Chapter 3 included a discussion of the research methodology selected to address the questions posed in the study. Also discussed were the design, the data collection, the method of analysis, and the pilot study results. Steps taken to ensure the confidentiality of the data and to obtain consent were specified. Chapter 4 contains the analysis of the interview responses from the participants in the study and each of the research questions are addressed and answered.

Chapter 4: Results

The purpose of this exploratory phenomenological study was to explore the perceptions of pastoral leaders concerning the potential usefulness of BI in church organizations and to determine if BI has value for church organizations. The study involved collecting data in semistructured interviews from 20 pastoral leaders in Los Angeles County. The modified Van Kaam method and NVivo software were used to analyze the data.

Chapter 4 contains the results of the research study oriented around the research questions. The results are in a narrative format and supported by tabular data. The narrative and tables serve to provide the reader insight into the lived experiences and perceptions of the pastoral leaders who participated in the study. The chapter includes a discussion of the themes derived from the interview data.

Overview the Study

Churches differ from for-profit businesses based on their primary objectives. For-profit organizations are in business to generate a profit while churches have primarily spiritual and social objectives. Despite this fundamental difference, churches must operate like businesses with regard to managing and optimizing resources to achieve their social objectives. Church leaders often face many challenges in trying to achieve the objectives of their organizations. Information technology is one area that may assist church leaders in optimizing their resources and achieving their goals.

According to Stevens and Morgan (as cited in Heist, 2011), technology plays an effective role in any type of organization. Furthermore, BI in particular may prove useful

to church organizations. Business intelligence has helped to improve organizational

operations and maximize limited resources (Ranjan, 2008). It is possible that the benefits

of BI that for-profits enjoy may translate into the unique church operating environment.

The research questions addressed in this study were as follows:

1. What is the current role of IT in church organizations?

2. What is the potential usefulness of BI in church organizations?

3. What potential conflicts, if any, might exist between spiritual and BI

    management objectives?

Data Collection

The main study included 20 pastoral leaders who manage a church and either

make or influence the decisions for the church. The participants pastor SMCs are located

in Los Angeles, California. Data were collected using semistructured interviews.

Interview duration ranged from 15 to 45 minutes and took place at a location of each

participant's preference. All the interviews were recorded using a digital recorder and

transcribed.

Names of the participants were not included in the recording. Each participant

received a code prior to the interview, and the code was used on the recording. For the

main study, the code was Study Participant followed by a number. The codes for the

main study ranged from Study Participant 1 to Study Participant 20.

Prior to each interview, each participant received a formal invitation letter and

signed a consent form. Participants received the invitation letter via e-mail prior to

meeting them. However, the participants reviewed the consent form face-to-face to allow

for any questions the participants might have. Prior to commencement of the interview, the researcher discussed with each participant the basic concept of BI so that when participants answered any questions that contained that term, they would have a basic understanding of the concept.

Evidence of Trustworthiness

The pilot study served to ensure the interview questions were valid and suitable for answering the research questions. Chapter 3 contained the findings. The pilot study results confirmed that the interview questions were suitable for extracting responses from the participants that address the research questions. For a phenomenological study, it is important for the researcher to engage in the reflexive process. I engaged in this process by clarifying my personal attitudes and beliefs regarding the phenomenon under study.

Furthermore, tracking and reviewing the codes generated during data analysis served to ensure stability over time. I will securely maintain all field notes, recordings, transcripts, and e-mails for a minimum of 5 years. All field notes and documentation are kept for the purposes of an audit trail, if necessary.

Main Study Findings

A discussion of the findings of the main study follows. A demographic and background profile appears first, followed by a narrative describing the results of the study organized around each of the research questions. Tabular data and supporting participant statements support the narrative. A discussion follows of the themes that emerged for each research question.

Demographic Profile

Twenty pastoral leaders, aged 28 to 70 years, were selected for semistructured interviews. Table 9 shows the breakdown of the ages of the participants. All of the participants had at least some college education (see Table 10), and all but one participant had some form of religious education (see Table 11). Pastoral experience ranged from less than 4 years to over 20 years (see Table 12). The demographic profile of this study indicates a wide range of ages, education, and pastoral experience. This diversity was advantageous for gleaning a variety of information due to different levels of experience.

Table 9

Main Study: Demographic Breakdown of Ages

Age range	*n*	%
28 to 30	2	10
31 to 40	5	25
41 to 50	7	35
51 to 60	5	25
Over 60	1	5
Total	20	100

Table 10

Main Study: Demographic Breakdown of Highest Education Level Completed

Highest education level completed	*N*	%
Some college/AA	4	20
Bachelor's	3	15
Master's	8	40
Doctorate	5	25
Total	20	100

Table 11

Main Study: Demographic Breakdown of Religious Education

Years of religious education	*n*	%
None	1	5
1 to 4	2	10
5 to 10	8	40
Over 10 years	9	45
Total	20	100

Table 12

Main Study: Demographic Breakdown of Pastoral Experience

Years being a pastor	*n*	%
4 or less	1	6
5 to 10	7	39
11 to 20	7	39
Over 20	3	17
Total	18	100

Background of the Participants

The participants described becoming pastoral leaders and noted their involvement with church ministry while growing up. Many served in churches as youth leaders, choir directors, and Sunday school teachers, as well as in other various roles. Several pastors mentioned that they did not have an initial desire to pastor a church, but many described taking on the pastoral leadership position as a call from God. Study Participant 10 reflected:

Well, I've been preaching for 26 years and preaching at the same church. And it just so happened that the pastor passed away 16 years ago and for a year I was here conducting the services and then they voted me in as pastor. And so it was a

calling, basically the first calling into the ministry was very challenging because everybody said I was going to be a minister and so I was trying to prove them wrong. But when the Lord called me I was actually in the process of entering the Armed Services and something happened in high school, because this was right after high school, and I ended up not going.

And when I really asked the Lord whether or not what he wanted me to do and he literally came to me in a dream. He said you are a sent minister called upon by God to preach the gospel, not a called minister looking for somewhere to be sent. Those were my marching orders there. Pastoring was a little bit different. I had no thought of pastoring, I literally tried to leave this church a couple of times to go somewhere else and every time I left I ended up nowhere so I ended up back here.

Study Participant 11 stated:

Well, actually I—it was never my desire to become a pastor. I guess through the maturation process of being in church, being raised in church as small child. My mother was very influential being the matriarch of the family, a very spiritual woman and she gleaned that from her grandmother—her mother which is my grandmother. I'm sorry. And we were just pretty much raised in a church background and so my experience in being involved in church I've always been exposed to the organizational part [of] it, how churches were ran and the pastoral leadership, some of the auxiliary leaders. And from there I just began to involve myself in some areas because of the influence.

Study Participant 15 stated:

> It's amazing that I am a pastor. It's nothing that I set out to do, actually. I really was born into it. My grandfather is a pastor and a bishop. My father is a pastor. My mother is a pastor, and I thought, I'm going to be a pro basketball player.

All of the pastoral leaders had some kind of social programs available to the congregation or community in place or plans to put some in place in the near future. Table 13 shows the concepts derived from the responses concerning the goals and missions of the church. Some of these programs include food and clothes giveaways, mental health programs, and community development centers. The other goals and missions of the church are spiritually based and mainly deal with evangelism.

Pastoral leaders operate in a unique environment. They must manage the spiritual and administrative and financial issues of a church. The pastoral leaders depicted this experience as a duality of being challenging, cumbersome, frustrating, and still rewarding and worthwhile. The results showed that many of the challenges perceived by the pastors come from the administrative and financial aspect of managing the church. Table 14 shows the breakdown of responses regarding the pastoral experiences of the participants, particularly managing spiritual and administrative/financial issues of the church.

Table 13

Main Study: Goals and Missions of the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Provide basic physical assistance: food, clothing shelter	10	50
Evangelism, bring Gospel to the people	10	50
Provide life skills training, counseling and/or mental health services	8	40
Impact, develop the larger community	5	25
Create fellowship among church members, meet social needs	4	20
Provide spiritual education, foster spiritual development	4	20
Promote spiritual, mental, physical health through outreach program	4	20
Appeal to the needs of a diverse congregation, be open to all	4	20
Toy programs/donations	3	15
Provide school supplies	3	15
Vocational and employment counseling programs	3	15
Appeal to younger generation, bring young people into church	3	15
Assistance to African ministries	2	10
Increase church membership	2	10
Help create healthier diet and exercise lifestyles	1	5
We're developing a nonprofit organization	1	5
Senior ministry to help with insurance, medical, food benefits	1	5
Provide community services such as medical screening	1	5
Start a community development corporation for community	1	5
Scholarships	1	5
Head Start preschool	1	5
Events for children such as vacation bible school	1	5
Tutoring and youth academic prep programs	1	5
Build a church of people, purpose, power, praise	1	5

Table 14

Main Study: Experience of Managing Spiritual and Administrative/Financial Issues of

the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Challenging yet rewarding	5	20
I focus on the spiritual work, have others to handle the administrative work	5	20
Financial ability of church is in God's hands	4	20
Spiritual aspect is the easy part, the financial/administrative aspect is difficult	4	20
24/7 job, giving profession, have to be all things to all people	3	15
Depend on capable volunteers to help with administration/ finance	3	15
Feel pulled in different directions, hard to balance	2	10
Finding the budget for all the things we want to do is a challenge	2	10
Work/life balance is difficult with a family	2	10
Members have financial limitations, hard to get donations	2	10
Having a business/managerial background makes administrative responsibilities easier	2	10
Hard for others to understand that a pastor has administrative responsibility for the church as well as spiritual	2	10
Changing church demographics present challenges	2	10
Being in a small church is daunting, fewer resources, have to have volunteer help or do everything myself	2	10
Synergystic leadership, incorporating others into decisions keeps church running smoothly	1	5
Try not to make decisions while emotional; follow Golden Rule, try to respond, not react	1	5
There is a stereotype that pastors are out for money with lavish lifestyles, some don't get the money from church, hard for people to trust that I'm genuine	1	5

Several participants expressed that managing the spiritual matters of the church

are easier to deal with rather than administrative or financial matters. For example, Study

Participant 2 stated:

> I think that's—it's a big responsibility and it keeps you kind of going in two
>
> directions. First of all, managing the spiritual is far more easier [sic] than
>
> managing the business side of it. I think that I do as well as I do because of the
>
> fact that I have the experience working for another church, but I don't have the
>
> resources that they have.

This statement pointed to the idea that lack of resources may be one reason why

managing administratively or financially can be such a challenge.

The results indicated that the pastors tend to manage the spiritual aspects of

running the church closely and personally while they delegate much of the administrative

and financial matters to other church staff. It seemed evident from the responses that the

pastors understood that all aspects of church management needed effective handling.

Study Participant 4's response supported this sentiment:

> I laugh because one of the things that—when I stated earlier that I really didn't
>
> see myself being a senior pastor is because I understood that being a pastor was
>
> more than just preaching every Sunday. That aspect of it, for every pastor, that's
>
> the easy part. That's—we can do that with our eyes closed. But when you get
>
> down into having to deal with the business aspect of the church as it relates to
>
> your finances, you've got to make sure that your finances are in a position to help
>
> you do ministry. You can't do ministry without having money.

The following statement from Study Participant 5 echoes the thought that both spiritual

and administrative matters are equally important and must be handled accordingly:

There is an enormous disconnect in the church in the understanding that pastors

are not just shepherds of people. People fail to realize things, like I just had a

meeting last Sunday with some of our staff and we talked about how we manage

and maintain supplies. One of Paul's admonitions to the preachers were that they

be good stewards or managers of the Lord's house, and the word "steward" there

is *economoi*, from which we get the word "economy," and it deals with our ability

to manage things as well as managing people. A lot of people miss that, that we

have a responsibility to manage money as well as to manage people.

Furthermore, Study Participant 8 stated,

God is helping me, God loves me, and God is directing me, but secondarily as a

pastor what I have come to recognize is that the other side of the coin, the

corporate side of the coin, is much more difficult to manage because people don't

necessarily see its importance. I think if you would poll many of the people at

least in our congregation they wouldn't even realize that we are a 501(c)3

nonprofit religious corporation. They don't recognize that we have a

responsibility to pay taxes as a church. They don't recognize that we have a

church responsibility to have insurance and those kinds of things. They kind of

knew it in their minds so managing that is most difficult because then you have to

get people to agree. You have budgets that you have to put together and again

you have to meet deadlines and bills and things like that.

Some pastors included other aspects that make being a pastoral leader challenging yet

rewarding. For example, one was achieving a work–life balance. Thus, not only must

the spiritual and financial or administrative matters of the church be handled, but some pastors found balancing home life to be an integral part of being a church leader as well. Study Participant 11 stated,

> It's challenging yet rewarding. The challenging part is being able to balance the spiritual part as well as certainly being a family man because I am a husband. I've been married 38 years and my kids are also still here, adult children, as well as the grandchildren here. And so maintaining that balance of leading church as well as leading your families well and then being father as well as pastor and being—handling the business, the daily operations of the church, we have various projects that have been introduced for us to look at and exploring the possibilities of making us more of a cutting-edge ministry. And so entertaining those ideas and sitting down with my board and having focus group meetings and talk about all the possibilities, those things can be challenging because you have to be all things to all people and then I have to be able to balance that.

In terms of leadership styles, several participants described their style as down-to-earth, compassionate, and nonjudgmental. In terms of interaction with staff and members, several participants responded that their objective is to coach, empower, and lead by example. Participants varied on whether they approach business and spiritual aspects of their work differently (see Table 15). A majority thought there was at least some difference in the way they handled spiritual and business matters, with the tendency to handle business matters with more expediency and strictness, referring to a general conceptual difference between managing a business and acting as a spiritual mentor.

Also, a few mentioned that the handling of either type of situation would be dependent

upon the circumstance.

Table 15

Main Study: Leadership Styles in Dealing With Spiritual Versus Business Matters

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Yes, the same principles apply to both spiritual and business matters; spirituality comes first	5	25
More harsh in business matters, more compassionate/lenient in spiritual matters	4	20
No, spiritual and administrative require different philosophies/behaviors	2	10
Yes, same	3	15
I have a higher level of confidence in the spiritual matters, in other matters I'm more open to someone who may know more than me; in both I am productive	1	5
Sometimes, it depends on the situation, with different individuals or whether a matter is urgent	1	5
Different because I'm manager in business matters, coach in spiritual matters; the same because I have to be the father figure in both	1	5

Research Question 1: What Is the Current Role of IT in Church Organizations?

All pastoral leaders interviewed described using some form of IT in their church

organizations (see Table 16). The extent to which technology is used varies widely, with

one pastor using computers for e-mail and other basic tasks, and another pastor with

previous IT experience using social media, church management software, and

sophisticated audiovisual equipment for church services. The findings indicated that IT

is used for three main purposes in the church: communications and marketing, sermon

preparation and delivery during church services, and financial management of the church.

Table 16

Main Study: How IT Is Currently Used in the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Facebook	14	70
Use church membership management software (Membership Plus or other)	10	50
E-mail or texting	9	45
Twitter	8	40
IPad for preaching	8	40
Use financial or accounting software (other than Excel or unspecified)	8	40
Stream service live	6	30
Google or other internet search engines for research	5	25
Website	4	20
Bible software	4	20
Large screens to broadcast service, videos, or display PowerPoint	4	20
Wireless internet	4	20
Intend to use large screen TVs in church	4	20
Use Excel for church financial records	4	20
I have IT background so we do more than most small churches	4	20
Don't use social media yet	3	15
Initial resistance by church members or staff	3	15
Basic document management, formatting and printing	3	15
Conference calls between churches	2	10
Currently updating web page	2	10
Encourage members to Tweet or post messages about the sermon to Facebook during service, invite others	2	10
Manage accounting manually	2	10
Conference calls for Bible study	1	5
Intend to use a new web-based technology used for marketing by huge corporations, even smaller churches will have access to it	1	5
Yelp	1	5
LinkedIn	1	5
Have Twitter account set up but haven't used it yet	1	5
Plan to stream services live	1	5
Currently upgrading computers/IT system	1	5
Have used YouTube clips in sermons	1	5
SendHub for texting from database, phone tree to disseminate message to all members	1	5
Videoconferencing between churches	1	5
Use Church Community Builder for central communication with other ministries, people serving ministries can schedule appointments, can schedule resource needs as well	1	5
Technology to reach out to military members in church while they're away on duty	1	5

For communications with staff and the congregation, the pastoral leaders reported using mostly e-mail and text messaging. A few pastors mentioned using conference call technology such as Skype as well. The pastors used telecommunications and conference calling to conduct church business remotely. If pastors are out of town, they are able to facilitate communications not only with their staff but with their congregations as well. Some church services such as Bible study or reaching out to members who live a far distance from the church or who may be immobile are able to take place without everyone being physically present in the same place.

For communications with the public, social media appeared to be the choice for the pastoral leaders. For example, 14 participants (70%) indicated that they use Facebook in some capacity and four participants (20%) mentioned using websites to display information for the public. A majority of pastoral leaders reported using social media for a variety of purposes. At a minimum, they use Twitter and Facebook to convey church-related events and other announcements; heavy users described using Facebook and Twitter to conduct outreach and marketing, to evangelize, and to augment church educational activities such as Bible study. A few pastors mentioned that they encourage their members to use social media during the services to share the sermon. Study Participant 17 stated,

> I'm the type of person where I know young people. They love the Twitter. They
> love this and that. I encourage young people to Twitter in church. Twitter
> something that was said. Twitter a gospel song that was sung. Twitter the

scripture that was brought up. Twitter somebody telling them you should be in church.

Despite the extensive use of social media by the majority of the pastoral leaders, three participants (15%) stated that they did not use social media. The main perspective concerning social media was that it is an asset because of its capacity to reach a global audience, because it attracts members from a younger generation, and because it is free and effective advertising.

The second main use of IT in the church is for sermon preparation and delivery during church services. The pastors noted using Bible software for sermon preparation. Several pastors stated that they use their iPads to prepare and deliver their sermons from them during church services. Pastors use screens and other audiovisual equipment to broadcast the services, and several pastors stream their services live over the Internet.

The third main use of IT in the church is for administrative and financial management of the church. Only three participants reported tracking financial records manually. The remaining participants described a range of electronic solutions, from using Excel for recordkeeping to advanced church organizational software such as Membership Plus and PowerChurch to track donations, allow members to donate online, and track church participation. There was a strong sense among the pastoral leaders of the necessity of keeping up with current technology to ensure their churches will flourish.

Pastors use a variety of methods and strategies when selecting and implementing the technologies. Pastoral leaders often will rely on knowledgeable staff and members for advice on possible technology to implement. Other times they receive information

via word-of-mouth or simply observe what kinds of technology are in use at other churches. Pastoral leaders typically do not make unilateral decisions about selecting and implementing technology in their organizations. The pastor has the final say, but a board, staff members, or other individuals with skill and expertise help inform a decision regarding which technology to purchase and implement.

Generally, an information gathering process takes place to determine existing and future needs. Participants described actively looking for ideas to improve their churches through technology and research-specific software solutions. Several pastors described making decisions based on a cost-benefit analysis in which they consider the efficacy of potential solutions and their affordability. Pastoral leaders typically described relying on volunteers who have technological skills and expertise to implement technology including audiovisual systems, designing and updating church websites and social media accounts, and maintaining accounting and membership records. Table 17 shows how the pastoral leaders select and implement technologies for their church organizations.

When asked about the benefits of technology for the church, the most common response dealt with the ability to reach a wider audience and having a more effective outreach. Other popular responses dealt with the ability to communicate faster and more efficiently as well as having an overall efficiency and organization for church management. Other benefits cited include attracting a younger demographic to the church, time savings that can be used to devote to spiritual matters, and access to information for research. Table 18 shows the perceived benefits of technology use in the church as expressed by the pastoral leaders.

Table 17

Main Study: How Technologies Are Selected and Implemented

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Members with knowledge, resources, skills or experience help	9	45
Decisions are progress based, wanting to keep up with current technology	5	25
Word of mouth from other pastors/churches	5	25
Pastor has the final decision	4	20
Identify need and research what will meet need	4	20
Decisions made by a board or selected team along with the pastor	3	15
Affordability is the main consideration	3	15
Decision is based on how much technology will benefit the church	2	10
Use personal software or equipment for church business	1	5

The participants gave a variety of responses that represented unique perspectives on how technology is beneficial for them as pastoral leaders and for the management of their church organizations. For instance, Study Participant 3 described the benefits of technology in terms of being creative in sermon presentation and disseminating information to the congregation:

It's allowed us to be creative in sermon presentation because we've done things like we prerecord a skit or something and put it on the computer and make it almost movie-like. And it's kind of integrated into my message or into my teaching. It allows us to—let's say a lot of people now don't carry Bibles like when I grew up, but we're able to put the scripture on the screen. We are able to

put the points to my message on the screen. We are able to list information about

jobs or whatever else with less clutter. It's really been beneficial.

Table 18

Main Study: Benefits of Technology Use in the Church

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Ability to reach a wider audience, more effective outreach	9	45
Faster, more efficient information dissemination	6	30
General efficiency and organization	4	20
Efficient membership tracking and management	3	15
Attracts younger demographic to church	3	15
Allows creativity in messaging to engage members	3	15
Saves time to focus on spiritual matters	3	15
Access to unlimited information for research	3	15
Allows people to attend without having to be present physically	3	15
Social media offers free marketing tools with a broad reach	2	10
Allows remote management	2	10
Reduces pastor stress level	2	10
Allows for nicer formatting, layout and printing of materials	2	10

Study Participant 5 expressed how technology is beneficial for reaching a greater

audience:

The technology that we currently use for the church has extended our reach, not

just into our local community, but around the world. We have probably 4,000 to

5,000 hits and downloads of messages, both from podcasting, because there are

people who actually go online and podcast sermons. Every single week it just

downloads to their iPod, it automatically hits their iTunes, or they go in and
manually download messages every week, and there's absolutely no reason in the
world that a church our size has those numbers apart from the technology. There
are a lot of people listening.

Study Participant 15 described the role of technology for communication and its
significance:

Wow. Speeding up the process of communication. The pastor's number one tool,
his greatest tool, is communication. It's not about being—I'm learning this as a
pastor—it's not about being the greatest pastor or the greatest preacher. It's about
the being a good communicator. Communication is so key in getting the message
across of changing lives and changing destinies. So it's helped in the greatest
way that it just helps us be more effective in ministry.

And Study Participant 16 perceived multiple benefits of technology use in the church
including efficiency, providing information for decision making, and tracking
information about members:

There is a ton of benefits in there. One is, I would say is, one is efficiency as it
relates to time. Being able to do things a lot quicker, getting information a lot
quicker, getting information to people a lot quicker. Another benefit is having
everything in one place. Sometimes, you know how it is, you need information.
It is all over the place. Where do I get it? Where do we keep it? Having a central
location for information, that is a huge piece in technology.

Some of the other benefits in the technology is you obviously are able to make decisions based on the information that the technology gives you. So, those are some things. Also, one, the systems we use now helps us find people who come to the church. Ultimately, if a person comes in our church, our goal is when they come in the first time, to see them come in the second time. When they come back the second time, see them come back the third time and ultimately join the church, you know accept Christ, join the church, get involved in the ministry. So, software allows you to track that process as well to see is that happening and if it is not happening where is that breakdown taking place and then having cues and things that come up to tell you where you are in the process. Have we dropped the ball somewhere? It kind of helps us be more efficient, I guess is the long and the short answer.

Seven themes related to the first research question regarding current uses of IT in churches. Table 19 shows the emerging themes and supporting statements from participants. Information technology helps to facilitate sermon preparation and presentation, to market the church to the public and promote church growth, and to manage the accounting and finances of the church. Pastoral leaders are active in using social media to draw in members and share information. Within the church, pastoral leaders rely on multimedia to enhance their services and make them more engaging. Additionally, telecommunications have allowed pastoral leaders to connect with their staff and members remotely when necessary. The process by which the pastoral leaders

select and implement these technologies involves networking with skilled staff or

volunteers for advice as well as observing the technology implemented in other churches.

Table 19

Emerging Themes: Current Role of IT in Church Organizations

Theme	Participants' supporting statements
Technology facilitates research and information on spiritual matters and sermons, as well as organizing and presenting sermons	The internet allows me to cultivate my sermons. It gives me information. It gives me different words that I could engulf in my own vocabulary and stuff like that.
	I downloaded software, Bibles, I have a King James Strong Concordance Bible and it lets me click on, I can study the Greek and Hebrew words and click on it and it gives me the meaning, so I can study from pretty much anywhere. That's good information as far as spiritually being able to have a Bible at your disposal and being able to get effective usage out of it.
	All my sermons are inputted in my iPad and even my Bible study outlines and I do use the internet for commentaries to get other perspectives from professors that exergy – the word to a different degree than I may have thought and to gain access more revelatory words.
Social media and technology are being used as evangelical tools to promote church growth.	In the last 365 days, the people that have come and joined our church I would say have all been the result of technology in our church.
	With the marketing aspect, any Facebook, any Twitter account, any MySpace, if people still use that, web sites, that's a great marketing tool. I think it can be a great, free or low-cost way of getting the Word out if it's done correctly. Getting marketing done to reach more masses of the people.
	So I've used technology that I've used to market in real estate to also do the same in church. I truly believe Jesus was the best marketer than anybody could every name to take 12 men and affect the whole world.
Most church organizations use Excel or other software to manage accounting and finances and/or church management	We're absolutely using cloud storage. We use it with our accounting team. We use it with our bookkeepers. All we have to do is put the files in the drop box, and as soon as they upload on one side, they download on the other side, and everybody can go right to work.
	We currently use a program called Power Church [for] our church management. It has our accounting systems on there. It has a number of other resources that allows us just too kind of manage the flow of what we do in ministry.
	Membership Plus, which is a software that literally houses all the information of every auxiliary, every church member and their giving, their tithing. It keeps track of what's going out and what's coming in financially. Then it keeps track of the memberships, where they're working, what auxiliaries they're in, positions that they hold. It's an awesome software.
	We use Membership Plus…Information technology allows me to stay in communication with you. So when someone visits here we make sure we get their information, we send them a thank you card for coming. We follow it up with a phone call.
	Excel is the only thing that we actually use…my financial secretary actually hands me an actual report at the first of each month of what we took in and what we actually put out.
Most churches are at least somewhat active using social media for marketing and information sharing	We use [Facebook] oftentimes to publicize our different meetings and different things that we're doing to our members and to the general public.
	Our members, we remind them, literally every Sunday to check in…so people can see there's actually somebody here on Sunday. When I go to Facebook, it will actually tell you what the reach is…how many people are being exposed to your church as a result of these interactions and things that are happening online. So we keep track of that.

(table continues)

Theme	Participants' supporting statements
	We're developing a multimedia ministry here at the church were we have a group of people that are tweeting all through service, who are tweeting things that we are preaching about while service is

going on. They are on twitter tweeting things that are happening in service and inviting people to come. They're on Facebook blasting it while we're in service.

Many churches have capacity for large-screen broadcasting within the church or have plans to implement it in the future; it is perceived to improve the service by making it more engaging	We're also using multimedia displays during worship. Our entire morning worship is now up on screens and displays…we play video clips while we're preaching. If I want to talk about a scene from a movie, like "does anybody remember that movie?" I turn it on and let everybody watch it in the middle of the message.
	We want to get TV monitors for the church and so that way we can do PowerPoint presentations on bible study nights or do a PowerPoint presentation on Sunday mornings.
	We are working now towards getting screens or a screen and just even like something that little is very significant in improving a worship service because it determines how engaged a person is going to be when visiting your service. Knowing the lyrics of the song for maybe a person who has never been to church or having the bible verse for a person that doesn't have a bible or know where to find the scripture. Technology like that makes the difference between how effective you are going to be or whether you are going to reach somebody or not many times.
	It's allowed us to be creative in sermon presentation because we've done things like we pre-record a skit or something and put it on the computer and make it almost movie like. And it's kind of integrated into my message or into my teaching. It allows us to – let's say a lot of people now don't carry Bibles like when I grew up, but we're able to put the scripture on the screen.
Church leaders network for advice or ideas on technologies, as well as using technology to facilitate networking.	Every single idea we had, we stole from people who were bigger than us and doing things better than we could.
	Oh just basic research and view, the word of mouth through other pastors. We have a comely group of young pastors that we always communicate with each other through texts, emails or phone conversations concerning their operations, day to day operations, how to be more efficient in our day to day operations. Lot of it comes word of mouth.
	I have lots of pastor friends that, you know, I like to pick brains so a lot of my information comes from sitting around with people. "What are you doing?" I go and visit churches a lot and sit down with the pastors. "Okay, what are you doing? How are you doing that?"
	Technology has blessed us in a way that it helps us connect with other partners who are struggling like we're struggling. I can get on the internet and I'll find out there are other church organizations that have come together and as a matter of fact, we do a conference call. We do an internet chat once a month of young black pastors, and we get together and talk about the problems in our community, and "Hey, my church has got this program through Target. My church has got this program through Walmart." "Oh really?'
Telecommunications and internet allow church leaders to provide services to members and participate remotely	Every week we stream our services live. We have the ability to communicate back and forth with those that are watching, not only locally but across the country. And so that's how we leverage our media.
	Our executive pastor, he's away for ten months in Kansas City on a job. He didn't want to miss the services so now we stream. We Skype him the services and things of that nature. So it's actually beneficial to the church… one of my members texted me earlier, "Pastor, I can't make it to Bible study, but can you Skype it?" So people are really getting into – they're receiving it.
	People can watch our broadcast live…they don't have to leave their home to come to church… some are hurt, they're elderly, they can't drive, they can't move around… technology has afforded us to go into the homes and do ministry in their homes without them actually having to physically be here.
	If I'm in Sacramento I can be in my hotel I can utilize this. I can even stream my bible study if I wanted to. I have the ability because of technology to continue to for my people to continue to hear and see my voice and not feel distance.

Research Question 2: What Is the Potential Usefulness of BI in Church Organizations?

Information is the key component of BI. The purpose of BI solutions is to help decision makers transform data that an organization collects into useful and actionable information. To help determine the potential usefulness of BI for church organizations, the participants were asked about their informational needs and how they thought their church organizations might benefit from having better information. The objective was to establish if a perceived need for better information exists. Without a perceived need for better information and perceived benefits to the organization based on having better information, the pastoral leaders may not perceive any need for BI in the church.

Informational needs for the church varied from the responses given by the pastoral leaders (see Table 20). Two of the more common responses dealt with having information concerning the needs and demographics of the surrounding community. Information about the community was regarded as important for outreach and efficient, targeted planning and provision of assistance and services. Several pastoral leaders expressed the need for current local demographics that would allow them to assess the needs and adapt their services to changing community demographics.

Table 20

Main Study: Informational Needs of the Church as Perceived by the Pastoral Leaders

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Information on the needs of the surrounding community	4	20
Demographics of the surrounding community	4	20
Information on different software and equipment	3	15
Information on church and non-profit management, legal requirements	2	10
Website analytics to determine scope of reach and impact	2	10
Concerns and suggestions from the congregation	2	10
Readily accessible accounting information	2	10
Information on grants available to churches	2	10
Feedback on church services and activities	2	10
Technology to help facilitate interaction and information sharing among other ministries	1	5
Information to help know where to invest money in the community, give to those who will create wealth and pour back into the church and benefit community	1	5
Programs and resources available in the community that could benefit church members	1	5
How to get financed and invest to make the money work for the church	1	5

All the pastoral leaders perceived some sort of benefit to their church from having better information (see Table 21). Based on having better information, the pastoral leaders believed that they would be able to attract a younger demographic and reach a global audience using social media as an evangelical or outreach tool. The participants expressed that using technology to yield better information would assist them in preparing more engaging, factual, and relevant sermons. Specifically, the pastoral leaders believed that using the Internet and Bible software to conduct preparatory

research, and metaphors to make the Bible more relevant to members' daily lives, was

useful in reaching, engaging, and retaining church members.

Table 21

Main Study: Perceived Benefits to the Church Organization From Having Better

Information

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Information would help in strategic planning, decision making for church programs and growth	7	35
Would help extend scope of outreach, add members	4	20
Technology, social media would attract younger demographic	3	15
Would allow church to stay progressive in terms of technology	2	10
Provide education to members so they are better in their families and make better decisions	2	10
Be able to brand and market the church	1	5
Better church self-assessment of progress	1	5
Helps engage members, find spirituality in the world outside the church, makes church more relevant to the outside world	1	5

Particularly, several pastoral leaders mentioned the ability to reach more people

with better information. For example, Study Participant 2 remarked how having better

information would be helpful in branding and marketing the church:

Well, like I said, I think we would be able to reach more people and let them

know about our services. We really don't have a marketing strategy and that

would be something good that we could use to reach people. We have the essence

of a brand, but we really haven't branded the church the way we ought to.

Study Participant 5 expounded further concerning reaching more people with better

information and being able to better meet their needs as a result:

I think I answered that question in my previous statement, that it affects us

because it affects who is in our local community. Again, it goes back to our

purpose and mission. We want to create an environment where our local

community can come and find resources and find assistance for their everyday

lives. We can't reach those people if we don't know how to find those people.

It's easy to say, "Well they're in your local neighborhood. They're not that hard

to find." Yeah, but we need to find the people who need to find us. There are

tons of resources available all over the place for people that need them. The

question is how do you marry those people with the resources that they need?

That's the issue. How do we get those two together?

Also, several participants cited basic efficiency in church operations as a major

benefit. Study Participant 8 explained,

Well, I think initially what happens is that you have a better view of who you are.

I think information technology puts at your fingertips the opportunities to see your

organization not as a microcosm but to see the entire organization—to have

information at your hand. Whether it is budgetary, whether it is demographic

information, whether it is membership information, to have that information

available through some electronic media it will really save you time and it will

help you to determine which direction you're going, what kind of changes you

need to make, whether you are meeting goals that you set, whether your vision is

headed in the right way, whether you need to readjust the vision. I think it's

immeasurable what you could do and how it would benefit us to have that

technology available corporately and even spiritually.

Additionally, participants cited ease of communication, ability to access centralized

information, and access to accounting records on demand as alternative benefits. Others

added that technology frees up more time for leaders and staff to devote more effort to

developing the spiritual mission of the church.

When asked specifically whether they would purchase BI software, all

participants responded positively. Table 22 shows the invariant constituents derived from

the responses. Several pastoral leaders stated that they would purchase a BI system if a

cost-benefit analysis supported the decision, whereas the majority would purchase it with

affordability being the only potential prohibitive barrier.

Table 22

Main Study: Would Pastoral Leaders Purchase BI Software?

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Yes, would purchase if not cost prohibitive	11	55
Would purchase if it was a benefit to the ministry	6	30
Yes, would purchase no matter what	5	25
Would definitely consider it	3	15

Some participants provided greater detail on the requirements of a BI system that

they would purchase. Study Participant 16 explained:

I think that I am going to give you kind of two answers to that which is more

general and specific. I think what prevents people from purchasing it, or would

prevent us from purchasing the software, is a lack of understanding of that

software to a lack of usability. Is it user friendly because there are a lot of great

software packages that are out there on the market, but most of the people in the

ministry are volunteers? These are people who have regular jobs somewhere else,

they don't do this full time, and they are not always savvy, technologically savvy.

So ease of use is very important. So if there were a program that is good but is

too complicated that would prevent us from purchasing it. Then secondly having

a program that is I guess scalable. Meaning that it can be a program that is

affordable for a mega-church or it can be broken down to be affordable for a

church that is not so large but has room to grow, so you know we look at that. Is

it a program that we can afford right now and does it has the capacity to grow

with us as we grow? Those are some of the things that are significant. So, we are

looking at those things as major deterrents.

Several participants indicated that they would purchase a BI system no matter what.

Study Participant 12 commented:

I don't think anything would prevent me from purchasing it because once a need

is created then you have to go whatever lengths or breadth or depth to meet that

need. The success of any business is there a need for what is being offered. If our

ministry needs this information to be successful then it would behoove us to do

whatever it takes to gain this information to enable us to have a successful ministry.

Likewise, Study Participant 15 asserted:

Oh absolutely. I'd buy it in a second. I'd buy it in a second because if there's something that the church must do, and I think that we do terribly, is keep up with the times. Listen, Jesus was a revolutionary. What people don't understand about the church is, you have people trying to be Jesus and preach what Jesus preached in his times. He said, "Greater things than this will you do." He didn't mean greater miracles. He means you'd have more time, you'd have more technology, you'd have access to more intelligence than I do in the 7th century BC, you know what I mean?

Still other participants, while positive toward the consideration of purchasing a BI system, expressed some qualifications. Study Participant 14 believed that a BI system needed to be beneficial to the church, although it was not specifically explained how it must benefit the church:

As long as it's an investment. Absolutely, as long as it's an investment and I know that it'll be beneficial, you know, for the ministry and for the church and it's not a waste of money. Because, like I said, we're a small church, young church, and we don't have money to waste, you know. If it's beneficial, absolutely. I would definitely research it and research other people that have it. And if they have like a website or whatever, how they get a review, the five stars. If they have two stars, absolutely not. But, you know, if it's beneficial.

Four emergent themes related to Research Question 2. Table 23 lists the four themes along with supporting statements from the participants. Pastoral leaders want to be able to collect and track information about their members. They believe that tracking information about the community will be helpful in assessing the needs of their community and then providing services to help meet those needs. Pastoral leaders view social media as a great tool to promote church growth via effective marketing. Moreover, pastoral leaders perceive technology and social media as effective tools for attracting new members. BI is technology driven by information and can be useful in helping churches manage the information about their members and help develop marketing strategies for attracting new members.

Table 23

Emerging Themes: What Is the Potential Usefulness of BI in Church Organizations?

Theme	Participants' supporting statements
Having access to a member database allows better program management and planning.	The benefit is being able to collect and retrieve information for the church and for the members, too.
	We're in the process now of trying out two different softwares. One is Dinariant and then the other one is Membership Plus…they pretty much keep all of the member's information in the computer system individually and then it really helps with the finances… people want their statement at the end of the year and we ain't got to worry about writing it and calculating it up, the software does it for us and it really keeps the church organized.
Technology and social media attract new members, particularly younger members	It's obvious the more technology you use the more younger people you're going to attract. And I'm not just talking about, like, teenagers. I'm – one of the things that I'm really trying to push for is reaching that senior in college and who's coming out because those are the ones that's gonna impact what goes on in the community.
	I would say that technology will help in a lot of ways to keep church attractive and appealing to those who are not members or do not go to church.

Themes	Participants' supporting statements
	We probably attract younger people, attract different demographic if we utilize the web page more or if we more accessible in-terms of social media and things like that. It certainly would help and would benefit us.
Social media marketing is seen as the future of church outreach and growth, including globally	The benefit [of live broadcasting] would be to be able to reach out and provide our services to a wider audience.
	There should be no reason why no one knows where your church is or no one hears of what's going on in a church if they need a church home, there's no excuse for that.
	It helps us touch a broader audience through radio and television, and on tape ministry. It helps us reach an audience that we would never reach, and so it's awesome. The Bible says that in the end time, that the word of God would flow through the airwaves and go all over the world, and this was before technology was ever thought of, but literally, our broadcast is seen in Asia. We get letters from people who watch us in Africa.
	When more pastors and more church leaders get out of the comfort of doing things how they used to do it and thinking outside of the box and trying to tie the 21st century in to the gospel of today I think that ultimately we will see the mission and the love of the church to begin to expand. I'm the type of person where I know young people. They love the Twitter. They love this and that. It's needed I think the church needs to embrace it.
Church leaders express great interest in using technology to increase awareness of community needs and demographics to plan programs and services.	Technology would allow for you to be more intentional because you can get the information quickly. You can research it more quickly…it allows for you to be more intentional, more strategic, more effective, and more efficient.
	We want to create an environment where our local community can come and find resources and find assistance for their everyday lives. We can't reach those people if we don't know how to find those people. There are tons of resources available all over the place for people that need them. The question is how do you marry those people with the resources that they need? If we can ever manage to get those two together, we'll be in good shape.
	The more information you have you can approach things more intelligently versus kind of feeling around or hitting and missing or hoping. So I think that it would help us to be able to go directly to the root or the source of a situation.
	Statistics on the families in the community, the single people; educational level; what's being purchased; information on how many people have particular needs in certain areas...right now we don't have another way of finding out what the needs are with the exception of just observing what's going on around us and leading a door-to-door campaign…but if somebody's already done all of the numbers…because a lot of that would kind of help you understand their mentality, their needs, etc., too, that kind of information would be totally valuable.

Research Question 3: What Potential Conflicts, If Any, Might Exist Between Spiritual and BI Management Objectives

To begin to answer this question, I first sought to get an understanding of how the pastoral leaders felt about the use of technology in general in the church. The pastoral leaders overwhelmingly supported the use of technology in the church, but qualified their answers by noting that technology must be used mindfully. Specifically, it should not distract from the spiritual mission or be used in a way that would violate spiritual principles. This kind of reservation about the use of technology emerged in the following statement by Study Participant 6:

> I don't feel it's a problem as far as long as it doesn't compromise God's word or compromise the integrity of the church as long as it's just for research, uplifting, and betterment. If it can be used as an aid and not take away. As far as I think, I probably would always be one to always preach from a Bible instead of a laptop, but that's just me. I don't think it's anything wrong with someone doing it, if you can do it, fine. I don't have a problem with that. And other areas as long as you can keep the integrity of what you're trying to do with the church. I see some churches they have it up on the screen like the projection. If it enhances, if it brings to it, I don't see a problem with it at all as long as it's not taking away from it or being a distraction. I think it's fine.

Study Participant 9 supported the use of technology in the church but had concerns about the tendency for technology to cause a disconnect between people and become impersonal:

I think, looking at it now from where things are going and what I see and how

useful it has been to a lot of churches large and small, I think that it's great. I

think as long as we don't lose the connectedness to people, that we don't replace

. . . we don't put technology in the place of relationship. As long as we don't do

that, as long as we're careful not to do that, I think that technology in the church

is great. I think it's needed. I think we need to be as cutting edge as possible.

And so the more technology we can come up on and really get acquainted with, I

think it makes it much better. It used to be when I was up preaching and I would

see somebody on their phone that I would think they weren't paying attention.

But many times people have Bibles on their phone.

Other participants who extolled the benefits of technology use in the church

admonished that churches that do not embrace technology would be at a disadvantage as

seen in Study Participant 8's statement, "I think that it's needed. I think any ministry that

shies away from technology is going to find himself falling behind." Study Participant 5

warned that churches that do not embrace technology would die:

I think churches that do not adapt to and embrace technology are going to die. I

believe those who have not already begun have begun to die, and they do not

know it. Those churches who have absolutely no media presence at all, who have

not embraced technology, are dying. They're not just dead, they're dying a slow,

painful, and agonizing death, and as it is with everything else that changes in the

world, the day is going to come when they look up and realize that the world has

fallen apart under their feet. . . . Those churches who have not accepted and

adopted the technology are going to find that they missed the memo that members

have been replaced by followers, and members have been replaced by friends.

Not all participants responded by highly acclaiming technology use in the church. Study

Participant 7 had a more tempered response: "I've seen some churches go overboard with

it. They're relying—too much of their energy is going into the technology aspect and

less on the spiritual part." But, when asked if he was more or less in favor of technology

in the church he replied,

> Oh, I'm more in favor of it. It is up to the leadership and senior pastor to not
>
> yield too much for it, not yield too much to it, excuse me, and also be respectful
>
> and always tell themselves to not get away from the spirituality of church because
>
> there's plenty of churches out there that it doesn't feel like a church at all.

In addition to asking about their perceptions concerning technology in the church,

participants were asked about how they manage and make decisions for the church from a

spiritual aspect versus using technology to assist them in decision making for the church.

The purpose was to get an idea about how the pastoral leaders go about making decisions.

If they relied more on a spiritual process, then they might not perceive any value in using

BI for improved decision making. However, if they perceived technology to be an asset

in making decisions for their organization, then they may perceive that BI can be useful

for improved decision making. The majority of the pastoral leaders asserted that

spirituality always supersedes technology, but technology can still be useful (see Table

24). The pastoral leaders typically acknowledged that a church organization, at least in

part, must be run as a business. Several said that the church is in fact a business. Some

participants believed that the business and spiritual components were inseparable because spiritual principles must always guide business decisions, while others saw the business component as being completely separate, subject to its own rules and principles.

Table 24

Main Study: Influence of Spirituality in Running the Church Versus Using Technology to Assist

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
Spirituality always supersedes technology, but technology can help inform spiritual decisions or communicate the decision, it's a tool	14	70
Spiritual and technology go hand in hand, should be used in perspective and not distract from God's word or mission of the ministry	9	45
Depends on the decision to be made, circumstances; technology provides facts, spirituality provides wisdom, situations sometimes require facts, sometimes spirituality	5	25
Technology is a gift from God, should be used	3	15
Technology is good for disseminating information or gathering facts	2	10
Technology and spirituality are separate things; technology for gathering information, spirituality more about the heart, use spirituality for dealing with a person's situation technology to make church more effective	1	5

Whether spirituality and business were seen as separate or inseparable components, the findings indicated that the majority of the pastoral leaders perceived that spirituality and the use of technology are compatible. The emphasis tended to favor relying on spiritual direction from God but the pastoral leaders acknowledged that technology is an asset worthy of use in decision making. This is evident in the response from Study Participant 2:

I'm going to always rely on god first for information. But, just in the natural

course of things, I'm going to use technology. For example, we could buy a

journal and write down everything that goes on, but that wouldn't make sense

when we could input it into software and it would do the work. So I would

definitely do those things that make sense and that would be expeditious for us to

do.

Likewise, Study Participant 4 stated:

I think it still goes hand in hand because ultimately, yes, the direction of the

church has to be God given. We get that because it's His church. However, the

better I'm able to get information, the better I'm able to decipher, okay, if I go

this way, I may end up messing up. The better I'm able to get information, the

better I am able to actually take the vision that He's given me and implement it.

Finally, the participants were asked about their perceptions specifically on

whether or not they believed that a conflict of interest might exist between using BI for

church management and achieving the spiritual mission of their churches. Table 25

shows the invariant constituents derived from the responses. None of the participants

expressed that they believed any conflict would exist. However, several participants

qualified their responses to highlight that no conflict would exist so long as the

technology did not distract from the spiritual mission.

Table 25

Main Study: Do You Think a Conflict of Interest Exists Between Spiritual and BI

Management Objectives?

Invariant constituents	No. of participants to offer this experience	% of participants to offer this experience
No, church is a business	10	50
No, as long as spiritual principles are followed	5	25
No, as long as technology doesn't distract from spiritual mission	5	25
Technology is a must, Bible says go into all the world, not your four walls; technology is a gift to the church	1	5
You need board members who are both business savvy and spiritual	1	5
No	1	5

Several pastoral leaders expressed that church is a business and as such there is no conflict between BI for church management and achieving the spiritual mission of the church. Study Participant 1 illustrated this sentiment when responding to the question about potential conflicts between spiritual and BI management objectives:

Church is the number one business in the world. It has to be treated like a business. I don't come in here on a Sunday morning with the mind frame this is just church. This is a business and if we're going to survive, especially in these economical situations that we're in, we have to treat it as such.

Study Participant 11 described church as a business but specified that a biblical focus in management of the church must be maintained:

The business management—from the business management, if it's categorized for the business part solely there's no problem because there's the business part that we have to make sure that we're expeditious in because a church is a business. From the spiritual end, I don't see it being a conflict as long as you use it in a way that complements what we're already doing biblically.

Several of the pastoral leaders used Jesus and the Bible in their responses to help explain why they believed a conflict would not exist between the spiritual and the BI

management objectives of the church. For instance, Study Participant 3 stated, "No, no. Because for even Jesus, spirituality and practicality was intertwined. And still now, if you read, really read the Bible, spirituality and practicality was intertwined." Likewise, Study Participant 10 explained:

> No because everything outside of the church is based on the church. If you look at business practices, everything is biblically based. Even though people don't relate it to business, it's business. Just like I said, you know, Jesus was the best marketer. He found a way to make something from nothing, you know. He took 12 men and affected the whole world, which is the whole foundation of marketing, being able to use what you have and to affect those that are around you. So every tool that's created was created to further the purpose I believe of the Word.

There are five themes that emerged related to research question 3: What potential conflicts, if any, might exist between spiritual and BI management objectives? Table 26 lists the five themes along with supporting statements from the participants. Pastoral leaders tend to view church as being a business. For the most part, pastoral leaders see technology as an asset and not a deterrent from achieving the spiritual missions of the church. Also, technology is seen as an enhancement to achieving the spiritual mission of the church, but pastoral leaders definitely believe that maintaining spiritual integrity has the highest priority. Handling the spiritual aspects of running a church comes more easily to the pastoral leaders. They expressed that it is challenging to balance the spiritual and

administrative demands of the church. Thus, pastoral leaders tend to be more hands on with spiritual matters and delegate much of the business matters to other church staff.

Table 26

Emerging Themes: What Potential Conflicts, if Any, Might Exist Between Spiritual and BI Management Objectives?

Theme	Participants' supporting statements
Spiritual and business matters can't be separate; church has to be run like a business	Data is good, data is very good. We have to do what makes sense in a business level. Church is the number one business in the world. This is a business and if we're going to survive, especially in these economical situations that we're in, we have to treat it as such. There's a business side. So you have to be able to be good at both. The churches that are going to flourish are the ones who are good in business savvy, but yet are spiritual also. You can do both. Even Jesus said, "Render that to Caesar which is Caesar's." In other words — and the Bible says, "Be not slothful in business." So don't use spirituality as a means to be so deep that you don't meet your physical obligations. There are principles, regardless to where you use them, that just work. Businesses have certain principles that work. So if I'm going to seek to grow a church, why not use techniques, methods, principles that are used outside of the church that work?
Church leaders struggle to balance spiritual and administrative demands	I think both can work smoothly if it's done right and then if everybody is on one accord because church business isn't that much different from business itself. You just – you have something called situational ethics. You're right on both ends. It's a big responsibility and it keeps you kinda going in two directions. First of all, managing the spiritual is far more easier than managing the business side of it. I think that I do as well as I do because of the fact that I have the experience working for another church, but I don't have the resources that they have. It is hectic. It is I would say that it really requires a healthy balance because it is easy to get outweighed, overweighed in both sides of that. The church needs spiritual leadership and it also needs management…that's a difficult task because as a leader we get pulled in a number of directions… you want to advance the vision of the church which requires spending time planning, spending time putting structure in place and you know like that strategic planning. But on the other side then people have spiritual needs that come up randomly. A lot of people see pastor, they see the color on, and they think that's the guy I'm gonna call if I get in trouble with the law and I go to jail. That's the guy I'm going to call when my mother dies or when my family member dies. That's who we call to look to for comfort. But they don't understand that we also have to care whether or not there's toilet paper. A lot of people miss that, that we have a responsibility to manage money as well as to manage people, and there are a lot of pastors who have no business managing money.

(table continues)

Theme	Participants' supporting statements
	The other side of the coin, the corporate side of the coin, is much more difficult to manage because people don't necessarily see its importance. You have budgets that you have to put together and again you have to meet deadlines and bills and things like that. So it makes it a little difficult even with board members who are not sophisticated in-terms of having background and experience in those areas.
Church leaders tend to deal directly with spiritual matters but rely on capable volunteers or staff to handle administrative/financial matters, including IT; volunteers can be difficult to find	One of the things that I believe that makes a good leader is a good leader is having capable people as it relates to finances and the administration. I have put those duties on others so that my focus can be more on the spiritual end, but also still overseeing and making sure all matters are taken care of appropriately. We're basically waiting for the arrival of that person that can handle the growth of the church along with their lives and right now because of the growth spurt in the ministry, we don't have the capable person right now of what I desire to have as far as our financial input services and things like that. We've had people come in that had the skills to put it together and the heart to use it, but even with the changes that have gone about in our economy it seemed like every time I get somebody that really has a great heart to it, that they started running the ad ministry or running the ad ministry and all of a sudden they were working on Sundays and working throughout the week. Like I said, they're young families. Like even this year I'm going to lose probably two of my technicians to college – sound and video.
For the most part, church leaders see technology as an asset, if not essential to being effective, and want to keep up with current technology.	I'm actually one who believes that the church should lead in most areas as opposed to constantly being behind, which I think we tend to be more behind than lead it. If we're going to be effective not just in ministry but as a ministry, we have to make sure that we're doing everything with a certain air of excellence…We just started seeing certain things that – wow. We were just so out of date and out of tune with things. So we just wanted to become a little bit more progressive in those areas. I think churches that do not adapt to and embrace technology are going to die. I believe those who have not already begun, have begun to die, and they do not know it. Those churches who have absolutely no media presence at all, who have not embraced technology, are dying. They're not just dead, they're dying a slow, painful, and agonizing death, and as it is with everything else that changes in the world, the day is going to come when they look up and realize that the world has fallen apart under their feet. As far as studying and research and just broadening your horizon as far as with technology, it's constantly coming up with new stuff, different stuff. And don't be afraid to venture off and use it to see and have an open mind about technology as far as new things that's coming out in the future.
Technology can enhance spiritual mission, but spirituality always comes first	I'm going to always rely on God first for information. But, just in the natural course of things, I'm going to use technology… to do those things that make sense and that would be expeditious for us to do. I think it still goes hand in hand because ultimately yes, the direction of the church has to be God given. We get that because it's his church. However, the better I'm able to get information, the better I'm able to decipher okay, if I go this way, I may end up messing up. The better I'm able to get information the better I am able to actually take the vision that He's given me and implement it. If the technology would coincide with the spiritual part of it, then I don't see a problem with it. I think you can make a decision on technology based on it. I think God gives us the ability to use our intellect, use our minds and use our gifts and talents. I think all that stuff comes from above, but as long as it's not harming the integrity of your spirituality, if you're comfortable with it, if you have a clear conscious of it, then by all means, I think you can make a decision spiritually or have technology influence a decision if it's not harming those spiritual aspects.

Summary

The responses from the pastoral leaders indicated that they embraced IT use in the church. The pastors perceived various benefits from its use, including time savings, efficiency, and reaching wider audiences. The pastoral leaders used IT for both the spiritual and the administrative and financial management of the church. Although the level at which the pastoral leaders used technology varied widely, the pastoral leaders were willing to use technology in some capacity to improve organizational performance.

Like other organizations, churches have specific informational needs for effective management. The findings indicated that not only do pastoral leaders recognize the need for certain types of information, but they perceive the benefits to their organizations based on having better information. Furthermore, the pastoral leaders perceived that BI systems can be helpful to their churches with the main potential barrier being affordability.

All the pastoral leaders responded in favor of technology use in the church. However, many expressed some reservations concerning technology in church because they recognized that it may be a distraction or used improperly. Furthermore, in managing the church, technology is perceived to be an asset and complementary to receiving spiritual guidance in decision making. Church viewed as a business was a common thread in many of the participants' responses and was one of the main reasons the pastoral leaders perceived that a conflict would not exist between spiritual and BI management objectives. Also, several of the pastoral leaders supported their view

concerning church as a business and the need to embrace both spirituality and business

and technology for managing the church by using Jesus and the Bible as examples.

Chapter 4 contained a description of the process of data collection and analysis

for the present study, as well as the steps taken by the researcher and other considerations

discussed to establish evidence of trustworthiness. The chapter contained detailed results

of the main study supported by tabular data and supporting statements from the

participants, as well as emergent themes. Chapter 5 includes interpretations of the

findings presented in Chapter 4, limitations of the study, recommendations for future

research and action, and implications for social change.

Chapter 5: Discussions, Conclusions, and Recommendations

Church leaders face various challenges in managing their organizations and achieving their objectives. A review of the literature showed that BI has the potential to provide a myriad of benefits including solving complex business challenges, maximizing limited resources, and improving organizational performance (Ranjan, 2008). However, researchers have only focused on BI in for-profit organizations. Lack of research in this area resulted in an opportunity to explore the potential usefulness of BI in nonprofits. The purpose of this phenomenological study was to explore the perceptions of pastoral leaders concerning the potential benefits of BI in churches and to determine if BI has value for church organizations.

The study involved semistructured interviews to collect data from 20 pastoral leaders. The findings indicated that church leaders use various forms of IT in their organizations mainly to prepare and present their sermons; communicate with their staff, members, and the public; and administer activities such as bookkeeping. The pastoral leaders perceived technology use in the church positively and associated many benefits with technology used in the church. Moreover, the pastoral leaders responded in favor of BI for church management and indicated that they perceived that it could be useful for their churches. Finally, no conflict was perceived to exist between spiritual and BI management objectives although many pastoral leaders expressed that spirituality has the greater priority and that care should be taken to ensure that technology, including BI, does not compromise the spiritual integrity of the church.

Chapter 5 contains a discussion of the interpretation of the findings. A discussion of the interpretation of the findings in terms of the conceptual support used for the study ensues for each research question. Also included in the discussion are recommendations for future action and research and implications for social change.

Interpretation of the Findings

Research Question 1

Research Question 1 asked what the current role of IT is in church organizations. The results showed that IT use is common in the church for both spiritual and business matters. Pastors use IT for research and information in organizing and presenting sermons, as well as for communications and marketing. Also noted was the prevalent use of social media, such as Facebook. Additionally, IT plays an important role in managing the accounting and finances of a church. The findings are consistent with the literature that indicated that churches are extending technology use beyond solely using it for accounting purposes; churches are using technology to support and enhance spiritual practice as well (Wyche et al., 2006).

The results showed that pastoral leaders believe that technology is vital for attracting a younger demographic and promoting church growth. Using technology to enhance services and be more engaging allows churches to remain current with the younger generations. This concept is consistent with Jewell (2005), who noted a technology-oriented church is necessary to reach a technology-oriented world and attract current and future generations.

Vokurka et al. (2002) noted that marketing in churches had been gaining attention. The findings showed social media play a central role in church marketing efforts. Social media allow churches to share messages from sermons, have a public presence, and establish a brand. Also, social media have been effective in communicating with the public and addressing potential members and supporters.

Pastoral leaders are open to implementing new technology. They have staff and volunteers with expertise to rely on for advice and recommendations as well as implementation, which evidences a change, as Hager and Brudney (2004) previously noted that typical church personnel lack IT experience. Several of the pastoral leaders mentioned having access to staff or volunteers with IT experience and expressed that they tend to observe what other churches are using in terms of technology for ideas. Pastoral leaders are likely to continue to embrace IT for their churches because they perceive it as an asset and a tool that enhances organizational performance.

Research Question 2

Research Question 2 asked what the potential usefulness of BI is in church organizations. To help determine potential usefulness, it is first necessary to determine if church organizations would have need of such systems. Churches may benefit from BI systems if pastoral leaders assess their informational needs and perceive benefits from having better information that BI systems may help produce. The findings indicated that pastoral leaders perceived several benefits to their churches from having better information.

Pastoral leaders perceived BI to have potential usefulness in church organizations. Specifically, many pastoral leaders believed that better information would aid in strategic planning and decision making for the church and promote church growth. Thus, BI systems can help to improve organizational performance if the BI system provides quality information. The pastoral leaders expressed the desire to be able to track and manage information about their members and the surrounding community. Business intelligence systems would be able to assist the pastoral leaders in this objective as well provide database management for data on the members and community.

Cost of the BI systems is the main potential barrier to pastoral leaders deciding to implement the technology. Affordability would depend on each individual organization and the availability of resources. Despite the overall favorable perception of BI for church management, some pastoral leaders expressed that they would purchase a BI system only if it was beneficial to the ministry, which could indicate that some pastoral leaders may want to first observe some benefits of a BI system at work in other organizations prior to implementing the technology in their own churches. Lockhead (1997) stated that the unique strategies and missions of churches may affect the decisions regarding IT adoption. However, I did not uncover any unique constraints that affected decision making regarding IT adoption or the potential to incorporate BI systems in particular.

Research Question 3

Research Question 3 asked what potential conflicts, if any, might exist between spiritual and BI management objectives. The pastoral leaders did not perceive that any

conflicts would exist, mainly because pastoral leaders view spiritual and business matters as intertwined. Pastoral leaders are very much in favor of using technology to help assist in church management but perceive technology to be an asset in achieving the spiritual mission of the church as well. Lelon (2003) asserted that churches should be treated as managerial organizations while maintaining the spiritual integrity of the church. The findings were consistent with this attitude, as the majority of the pastors indicated that spiritual integrity should remain the highest priority.

Church leaders may willingly embrace BI. Pastoral leaders expressed some wariness concerning the extent of technology use in the church and how far it will go. However, this wariness was mainly regarding the extent of the use of technology during church services and not church management. One factor that might hinder pastoral leaders from readily adopting BI technology is that they tend to struggle more with the business matters of the church than with the spiritual matters. Therefore, the pastoral leaders tend to focus their attention more on the spiritual side of running the church and may put BI adoption at a low priority or neglect to spend time researching BI options for their organization.

Conceptual Support

Three separate concepts provided support for this study: the idea of church intelligence, spiritual intelligence, and the similarity between SMBs and SMCs. Church intelligence, introduced by Tackle (2009), is BI for a church environment. Tackle explained that church leaders need to be able to track and understand the data they collect. The results confirmed this idea in that pastoral leaders expressed certain

informational needs and perceived that their churches would improve from having better information. The pastoral leaders specifically mentioned the desire to track information about their congregation and the surrounding community, which is consistent with Tackle's assertion.

Tackle (2009) remarked that the church environment is changing and church leaders would need to keep up with technological trends both inside and outside the church. The pastoral leaders agreed with this view. The results showed that many of the pastoral leaders believe that it is essential to keep up with current technology for the church to not only survive but thrive.

The second concept that served as conceptual support was spiritual intelligence. Spiritual intelligence describes the ability to solve problems via spiritual experiences (Hyde, 2004). Spiritual intelligence plays a central role in pastoral leaders' managing of the church. Business intelligence may become an additional support for problem solving and managing the church. The findings revealed that pastoral leaders support the use of technology as an asset and view technology as a support to their spiritual management of the church. Thus, pastoral leaders see the spiritual nature of managing the church as primary and technology such as BI as a complementary function.

The third concept supporting this study is the comparison between SMBs and SMCs. Small and midsized churches are similar to SMBs with regard to size, infrastructure, and operations. In recent years, SMBs have been able to take advantage of BI previously implemented mainly by larger businesses (Mikell, 2008; Shankar, 2008). Vendors offer less expensive BI solutions tailored to the needs and capabilities of SMBs.

Likewise, if vendors offer affordable BI solutions tailored to the unique needs and operations of churches, pastoral leaders are likely to take advantage of the product. The findings support this suggestion as the pastoral leaders were overwhelmingly in favor of taking advantage of BI solutions if available and affordable.

Implications for Social Change

The results of this qualitative study exposed the perceptions of pastoral leaders concerning the potential usefulness of BI in churches. The results represent a contribution to scholarly research and address the gap in the literature concerning BI for church organizations. The results indicated that pastoral leaders have informational needs and that they perceive BI may be helpful in managing that information for improved decision making and organizational performance. The pastoral leaders believed that BI technology would help them develop strategies for more effective outreach programs and increase church growth.

Improving decision making and church performance through the use of BI would positively affect the ability of pastoral leaders to achieve their goals and missions for the church. Churches have spiritual and social objectives, as evidenced by the results of the study. The results indicated that pastoral leaders have social outreach programs or plans to implement programs that include feeding the community, housing the homeless, scholarship programs, educational programs, and assistance to seniors. An improvement in a church's ability to provide social outreach programs is a direct benefit to the surrounding community.

Using technology such as BI to help develop strategies for evangelism and spreading a positive Christian message can have a positive influence on the surrounding community. Many pastoral leaders in the study expressed that their leadership style is to be compassionate and empower individuals to help themselves. Pastoral leaders are already using technology such as social media to reach out to the community, and BI can provide additional assistance.

Recommendations for Action

The present study was exploratory in nature. The intention was to gain an understanding about whether pastoral leaders of SMCs would find BI useful for the church environment and if they perceived that it would add value. The results of the study indicated that pastoral leaders are interested in BI technology and believe that it may be useful for their churches. However, pastoral leaders do not have experience in using BI solutions for church management. Prior to making plans to implement BI technology, some preparation and planning should take place.

According to the results of the study, pastoral leaders of SMCs sometimes tend to focus more on the spiritual work and less on the business matters. When churches are smaller and have limited resources, it is easy to neglect formal planning. It is recommended that pastoral leaders adopt more formal strategic planning procedures for church operations, including IT. Strategic planning will help pastoral leaders identify what needs to be done in the organization and how to do it. Strategic planning for IT would help lay the foundation for effective use of BI technology in the future.

Pastoral leaders should identify the relationship between the goals and missions they have for their churches and the IT and other business practices that will help them achieve those goals. The findings indicated that pastoral leaders had very clear ideas about what their goals were; however, there should be an evident connection between the goals and missions of the church and the strategies used to achieve them. Particularly, there should be a plan for how to use IT in those strategies. In this way, there would be a clear plan for how to use BI in the organization. Also, in preparation for implementing BI solutions, pastoral leaders should begin to think about how to collect the data they believe would be useful and determine how to put it to use. Furthermore, these recommendations are useful for improved decision making and organizational performance whether or not formal BI technology is chosen to be implemented.

Informational needs are different for church organizations, and given their unique operating environment, it is likely that specially designed BI software will be necessary. Accordingly, vendors of BI products may begin to look into the possibility of basic BI solutions for SMCs and brand it as church intelligence solutions. Vendors would need to determine if this direction is both worthwhile and feasible.

At the conclusion of this study, a summary of the findings will be disseminated first to the pastoral leaders that participated in the study. The results of the study will be shared with the study participants first in an effort to initiate sharing of the information with their colleagues and begin discussions about the application of the results. Additional distribution of the results may occur at various church organizational conferences and events.

Recommendation for Further Study

This research study addressed the lack of research concerning BI in churches. The results revealed that there is a potential usefulness of BI to help improve church organizational performance and to provide value to churches by helping pastoral leaders achieve the goals and missions of their organizations. Consequently, undertaking additional research may further extend knowledge concerning BI in churches and how it may be effective for the church environment. The following are recommendations for areas of further research:

1. Research the potential usefulness of BI in large churches. Larger churches tend to have more resources and may be more able to implement BI.

2. Research BI in churches from the perspective of the BI sector in the IT industry. Research may reveal perceptions on feasibility and profitability for vendors concerning offering a church BI product.

3. Research the core competencies and other factors necessary for successful BI implementation in church organizations.

4. Research the effect of spiritual intelligence and BI on church optimization.

This study illustrated one of various avenues of research related to BI in church organizations. Additional research into BI for church management represents a possible future direction in terms of BI for other types of nonprofit organizations.

Reflection

I grew up attending church and have visited many churches over the past 25 years. I have visited or been a member of both small and large churches and has certain

beliefs about how they operate. I have a background in accounting and finance and have personally witnessed the struggle of several churches to maintain operations and achieve their goals. My background played a role in selecting the topic for this research study because of these observations and experiences. To maintain a sufficient degree of objectivity, I acknowledged these personal attitudes about the topic and their potential effect on the research. During the interviews, I avoided leading questions and only asked probing questions that drew additional information about the main questions. I confined interpretations to the data present in the transcripts and did not draw on outside experiences or beliefs.

Concluding Statement

This phenomenological and exploratory study provided consistent results indicating that pastoral leaders embrace technology use in the church. Moreover, pastoral leaders expressed that BI in particular can add value to their church organizations. The pastoral leaders viewed technology as an asset, regarded technology as critical for social outreach, and require technology for staying relevant to a technological generation. The level at which pastoral leaders use IT varies, but the results of the study illustrate a distinct willingness of pastoral leaders to implement technology for the operational and spiritual improvement of the church.

Business intelligence systems are capable of addressing the informational needs of organizations and thereby improving decision making and ultimately organizational improvement. With further research, steps can be taken to develop tailored BI solutions for churches. Additional research can help determine how to implement BI effectively in

churches. Business intelligence may help church leaders achieve their goals, which

emphasize social outreach programs and positively impact the community.

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Appendix A: Semistructured Interview Questions

Part I. Focused Life History:

1. Tell me about your pastoral experience—specifically, how did you arrive at your current position?

Part II. Details of the Perception Under Study:

Behavior Questions

2. Tell me about how you currently use information technology in your church organization?
3. How did you approach these technologies (i.e., how did you select and implement them)?

Values/Opinions/Beliefs Questions

4. What kind of information do you think would be useful for you to have in order to make better decisions for your church?
5. How do you think your church organization may improve based on having better information?

Part III. Reflection on the Potential Implications of the Perception Under Study:

6. How do you feel about the use of technology in the church?

7. Do you think a conflict of interest exists between using business intelligence for church management and achieving the spiritual mission of your church? Explain.

Background/Demographics:

8. What is your age?
9. What is your education level?
10. How many years/months have you been a pastor?
11. Tell me a little bit about your pastoral leadership style (behaviors, philosophy, etc.)

Appendix B: Relationship Between the Interview Questions and Research Questions

Interview Questions	Research Questions
1. Tell me about your pastoral experience—specifically, how did you arrive at your current position?	Question 1 provides context for all three research questions. The questions is designed to illustrate the lived experiences of pastors and how it might inform their leadership choices regarding the use of technology in the church.
2. Tell me about how you currently use information technology in your church organization? 3. How did you approach these technologies (i.e. how did you select and implement them)?	Questions 2 and 3 are designed to provide data for Research Question 1 regarding the current state of technology use in the church, including the process for which technologies are chosen and implemented.
4. What kind of information do you think would be useful for you to have in order to make better decisions for your church? 5. How do you think your church organization may improve based on having better information?	Answers to Questions 4 and 5 are designed to provide data for Research Question 2 concerning the potential usefulness of BI in church organizations. The questions are designed to yield data about informational needs in the church and how it might be used to improve organizational performance.
6. How do you feel about the use of technology in the church? 7. Do you think a conflict of interest exist between using business intelligence for church management and achieving the spiritual mission of your church? Explain.	Questions 6 and 7 will provide data in answering Research Question 3. They are designed to explain the feelings and perceptions of technology usefulness in the church environment and to identify any potential conflicts of interest that may exist between organizational improvement and the spiritual objectives of the church.
8. What is your age? 9. What is your education level? 10. How many years/months have you been a pastor? 11. Tell me a little bit about your pastoral leadership style (behaviors, philosophy, etc.)	Questions 8-11 are demographic and profile questions that are used to provide a general contextual background for all three research questions.

Appendix C: Interview Guide

A. Preparation Activities

- Purchase and test digital recorder

- Get notebook and pens

- Print copies of signed consent form

- Review interview questions

B. Interview Activities

- Review consent form and have participant sign

- Brief participant on purpose and organization of the interview

- Discuss the general concept of BI and give examples

- Conduct interview

C. Postinterview Activities

- Jot down notes concerning impressions, feelings, and other observances

- Listen to recording to makes sure everything was captured

- Determine if follow-up interview is necessary

- Submit recording to transcriber

Appendix D: Invitation Letter

Your participation is needed to help explore the potential role of business intelligence in church organizations. It will require a small investment of your time through participation in an interview. A time and location will be established at your convenience. Participation in the study is voluntary and you may withdraw from the study at any time.

Who is needed to participate in this study?

Pastoral leaders of predominately African American congregations, with membership consisting of 500 members or less, and located in Los Angeles County are needed for participation in this study.

What is business intelligence and why is this research needed?

Business intelligence (BI) can be described as the combination of technology, business processes, and people that produce actionable information for the purpose of improved decision making, solving complex business problems, and achieving organizational goals. Extensive research has been conducted regarding BI in for-profit organizations and how it can improve organizational performance as a result of improved decision making. However, no research has been undertaken to determine if BI systems can be useful in nonprofit organizations such as churches.

What is being explored?

The purpose of this study is to explore the perceptions of pastoral leaders about whether or not BI can be of value to church organizations. The interview will cover topics such as current use of technology in the church, church informational needs, and the conditions necessary to consider or purchase new technology. Also, possible conflicts between pursuing management goals of the church and spiritual objectives will be discussed.

What are the implications of this study?

If it can be determined that BI may be of use to churches, further research can be conducted to discover more specifically how churches can take advantage of BI.

For more information, contact Charmaine Felder at charmaine.davis@waldenu.edu.

Appendix E: Interview Consent Form

Thank you for considering participation in the research study on business intelligence in church organizations conducted by Charmaine Felder, a doctoral student at Walden University. The researcher is inviting pastoral leaders who influence or make decisions regarding both spiritual and managerial matters of their churches to be in the study. This form is part of a process called informed consent to allow you to understand the study before deciding whether to take part.

Background Information:
The purpose of this study is to explore the potential role of business intelligence in church organizations. This will be done by interviewing pastoral leaders who make decisions or is involved in the decision making process to gather information regarding their thoughts and perceptions regarding this topic.

Procedures:
If you agree to be in this study, you will be asked to meet with the researcher in person for an interview lasting approximately 45 minutes to 1 hour. A follow-up interview for clarification or additional information may be necessary.

Voluntary Nature of the Study:
This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. If you decide to join the study now, you can still change your mind during or after the study. You may stop at any time.

Risks and Benefits of Being in the Study:
There are no known risks associated with this study. Being in this study would not pose a risk to your safety or well-being.

Business intelligence is a type of information technology known to provide for-profit organizations with the means to collect and analyze data resulting in improved decision making. Consequently, organizational performance is improved. However, results do vary and are dependent on various factors. The results from the study will help determine if business intelligence, or a tailored alternative, can play a useful role in church organizations.

Payment:
There is no payment for participating in the study.

Privacy:
Any information you provide will be kept confidential and only the researcher will know who participated. The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports.

Contacts and Questions:
You may ask any questions you have now. Or if you have questions later, you may contact the researcher via e-mail at charmaine.davis@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 1-800-925-3368, extension 1210. Walden University's approval number for this study is **04-10-12-0077896** and it expires on **April 9, 2013.**

The researcher will give you a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below, I understand that I am agreeing to the terms described above.

Printed Name of Participant

Date of consent   _____

Participant's Signature   _____

Researcher's Signature   _____

                                                             _____

Curriculum Vitae

Charmaine Felder

EDUCATION

Ph.D., Applied Management and Decision Sciences, Walden University, Minneapolis, Minnesota, 2012

Master's of Accounting, University of Southern California, Los Angeles, California, 2003

BS, Business Administration, University of Southern California, Los Angeles, California, 2002

CERTIFICATION

Certified Public Accountant, California

EXPERIENCE

2006-Present, Intelligent Optical Systems, Torrance, California

- Senior accountant and financial analyst

2003-2008, The Study Institute, Los Angeles, California

- Math teacher

- After-school tutor and coordinator

2005-2006, CBS Corporation, Los Angeles, California

- Financial Analyst

2003-2005, PricewaterhouseCoopers, Los Angeles, California

- Auditor