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# Budget Planning, Budget Control, Business Age, and Financial Performance in Small Businesses

Tracy A. Foster  
*Walden University*

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# Walden University

College of Management and Technology

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Tracy Foster

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Walden University  
2017

Abstract

Budget Planning, Budget Control, Business Age, and Financial Performance in Small  
Businesses

by

Tracy A. Foster

MBA, Syracuse University, 2000

BSBA, Montana State University-Billings, 1992

Doctoral Study Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Business Administration

Walden University

April 2017

## Abstract

Over 390,000 businesses failed in the United States in 2014. The primary cause for most business failures is poor planning, and budgets are a primary means of planning. The purpose of this correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The target population consisted of small business leaders in the Midwest. Churchill and Lewis's theory on the relative importance of selected management factors of small businesses through 5 stages of development formed the theoretical framework for this study. Data were collected through a self-developed online survey using existing Likert-scale measures for each variable based on prior research about those variables. A convenience sample of 86 Midwest U.S. small business leaders identified through SurveyMonkey's crowdsourcing pool resulted in 77 participants with useable responses. Standard multiple linear regression determined the extent to which budget planning, budget control, and age of the business predicted the value of financial performance. The model as a whole was able to significantly predict financial performance. The linear combination of predictor variables (budget planning, budget control, and business age) accounted for approximately 12% of the variation in financial performance. Budget planning significantly predicted financial performance, even when budget control and business age were held constant. Better planning using budgets may help leaders improve the financial health of their small businesses, potentially reducing business failures and job losses. Financially strong and healthy small businesses can create jobs and improve the economic health of local communities.

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## Dedication

I would like to dedicate this work to my wife, Laura, who has patiently provided unwavering support and encouragement to me, not only through this doctoral process, but countless other steps in this journey. Thank you for your confidence in me and your steadfast faith in our Lord and Savior Jesus Christ. It is only through Him and with your support that I could accomplish this milestone.

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## Table of Contents

List of Tables .....	v
List of Figures .....	vi
Section 1: Foundation of the Study.....	1
Background of the Problem .....	1
Problem Statement .....	2
Purpose Statement.....	2
Nature of the Study .....	3
Research Question .....	4
Hypotheses .....	5
Theoretical Framework.....	5
Operational Definitions.....	6
Assumptions, Limitations, and Delimitations.....	7
Assumptions.....	7
Limitations .....	7
Delimitations.....	8
Significance of the Study .....	8
Contribution to Business Practice.....	9
Implications for Social Change.....	9
A Review of the Professional and Academic Literature.....	9
Application to the Applied Business Problem .....	11
Theoretical Framework.....	12



Budget Planning.....	17
Budget Control.....	23
Business Age.....	29
Financial Performance .....	33
Budget Planning, Budget Control, Age of the Business, and Financial Performance .....	38
Transition .....	39
Section 2: The Project.....	41
Purpose Statement.....	41
Role of the Researcher .....	42
Participants.....	43
Research Method and Design .....	43
Research Method .....	44
Research Design.....	45
Population and Sampling .....	45
Ethical Research.....	48
Data Collection Instruments .....	50
Budget Planning.....	51
Budget Control.....	52
Business Age.....	52
Financial Performance .....	53
Demographic Variables .....	53

Instrument Reliability and Validity .....	55
Data Collection Technique .....	55
Data Analysis .....	60
Statistical Analysis.....	61
Assumptions.....	62
Interpreting Results.....	65
Software and Data.....	65
Study Validity .....	66
Internal Validity .....	66
External Validity.....	68
Transition and Summary.....	69
Section 3: Application to Professional Practice and Implications for Change .....	70
Overview of Study .....	70
Presentation of the Findings.....	70
Descriptive Statistics.....	71
Tests of Assumptions .....	74
Inferential Results .....	77
Applications to Professional Practice .....	80
Implications for Social Change.....	81
Recommendations for Action .....	82
Recommendations for Further Research.....	83
Reflections .....	85

Conclusion .....	86
References.....	88
Appendix A: Survey Questions .....	109
Appendix B: Survey Invitation .....	111

## List of Tables

Table 1. Terms Used in Literature Review Search .....	10
Table 2. Variable Measurement .....	50
Table 3. Survey Questions' Ability to Measure Variables .....	57
Table 4. Test-Retest Results for Study Variables .....	59
Table 5. Means and Standardized Deviations for Quantitative Study Variables.....	71
Table 6. Frequencies for Quantitative Study Variables .....	72
Table 7. Demographics of Study Respondents .....	73
Table 8. Correlation Coefficients Among Study Predictor Variables .....	76
Table 9. Regression Analysis Summary for Predictor Variables .....	78

## List of Figures

Figure 1. Power as a function of sample size.....	48
Figure 2. Histogram of the criterion variable, financial performance .....	75
Figure 3. Normal probability plot (P-P) of the regression standardized residual .....	75
Figure 4. Scatterplot of the standardized residual.....	76

## Section 1: Foundation of the Study

Section 1 begins with the background of the problem, followed by the specific business problem and purpose of the study. The nature of the study is next, followed by the research question and hypotheses. The theoretical framework of the study follows, along with operational definitions, assumptions, limitations, and delimitations of the study. I conclude Section 1 with the significance of the study and a review of the professional and academic literature.

### **Background of the Problem**

Budgets are a ubiquitous and versatile management tool leaders can use to help their businesses succeed. Budgets are an integral part of most organizations and serve a variety of management functions (Sponem & Lambert, 2016). Some have described budgets as a quantifiable form of the business plan designed to implement goals (Samuelsson, Andersén, Ljungkvist, & Jansson, 2016), while others define a budget as a quantifiable manifestation of a proposed plan to facilitate coordination and accomplishment of that plan (Réka, Ștefan, & Daniel, 2014). Réka et al. (2014) described the budget as a way for managers to monetize plans and targets, track progress, and support the implementation of strategy, planning, and control. Samuelsson et al. (2016) indicated that leaders use budgets for planning, controlling costs, allocating resources, assigning responsibility, and determining compensation.

Budgets are an important element of organizational management and serve multiple purposes. What is clear from the authors noted and other authors is that budgets are an inherent part of most organizations and support the primary management functions

of planning, directing, controlling, and decision-making (Sponem & Lambert, 2016). However, due to the pervasive nature of budgets in a wide variety and number of organizations, it is not surprising that budgets are under increasing criticism (Bourmistrov & Kaarbøe, 2013). Because of the pervasive and complex nature of budgets, leaders may fail to understand the importance of budgets to their organizations' success.

### **Problem Statement**

Poor financial management, including the lack of budget use for planning and control, often leads to poor financial performance and eventual business failure (Karadag, 2015). Over 390,000 businesses failed in the United States in 2014 (U.S. Census Bureau, 2017), and the primary cause for most business failures is poor planning (U.S. Small Business Administration, 2015). The general business problem is that poor financial management, including the lack of budget use for planning and control, is a primary cause of failure in small businesses (Karadag, 2015). The specific business problem is that some small business leaders lack knowledge about to what extent, if any, budget planning, budget control, and the age of the business predict financial performance.

### **Purpose Statement**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The predictor variables were budget planning, budget control, and the age of the business. The criterion variable was the financial performance of the business. The targeted population consisted of leaders of small businesses in the Midwest region of the United States. The implication for positive social

change includes the potential for more small business leaders to use budgets, increasing the likelihood that their businesses' financial performance may improve (U.S. Small Business Administration, 2015). Improved financial health of small businesses can help reduce business failures and job losses (Haltiwanger, Jarmin, & Miranda, 2013; U.S. Small Business Administration, 2015). Financially healthy small businesses enable business leaders to generate and sustain jobs, improving the economic health of local communities (Mason & Brown, 2013; U.S. Small Business Administration, 2015).

### **Nature of the Study**

The method for the study was quantitative. The quantitative method is appropriate when a researcher plans to use a positivist approach to accounting research (Luft & Shields, 2014). Luft and Shields (2014) described positivist researchers as those who test hypotheses based on theories using experimental, archival, or survey data. The quantitative method was an appropriate choice for examining the relationship between budget planning, budget control, the age of the business, and financial performance in small businesses. The quantitative method allows researchers to examine the relationship between variables (Yilmaz, 2013). Quantitative studies are a common approach to studying management accounting topics (Harris & Durden, 2012). Previous researchers used the quantitative method to conduct similar research on budgets and small businesses (Elhamma, 2015; Enqvist, Graham, & Nikkinen, 2014; Harris & Durden, 2012).

Qualitative studies are appropriate to answer questions of *how* and *why* (Bansal & Corley, 2012) and do not address relationships among variables. Therefore, a qualitative approach was not suitable for the study. Mixed-methods studies are useful when a



quantitative or a qualitative study alone is not sufficient to address the research problem (Bromwich & Scapens, 2016). Because the study required testing hypotheses based on established theories, and no qualitative data were needed, a mixed-methods approach was not appropriate.

The quantitative correlational design is appropriate when testing noncausal relationships among variables (Yilmaz, 2013). Therefore, the correlational design was appropriate for examining the relationships between budget planning, budget control, the age of the business, and financial performance. Although a small business leader's use of budgeting may directly affect the business's financial performance, only a true experiment could confirm such a direct relationship. With the experimental design, researchers study variables in a controlled setting (Johnson et al., 2013). Similarly, with the quasi-experimental design, researchers can examine causal relationships using nonrandomly selected participants (D'Onofrio, Lahey, Turkheimer, & Lichtenstein, 2013). Neither an experimental nor a quasi-experimental design was appropriate because manipulating the independent or predictor variables (budget planning, budget control, and the age of the business) was not feasible within the constraints of daily businesses operations.

### **Research Question**

To what extent, if any, do budget planning, budget control, and the age of the business significantly predict financial performance in small businesses?

## **Hypotheses**

Null hypothesis ( $H_0$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses does not significantly predict financial performance.

Alternative hypothesis ( $H_a$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses significantly predicts financial performance.

## **Theoretical Framework**

Churchill and Lewis (1983) proposed a theoretical framework to explain the relative importance of selected management factors of small businesses through five stages of development. In Stage I (existence) of Churchill and Lewis's theory, businesses are beginning their existence, and formal management systems are typically nonexistent. Churchill and Lewis posited that small business leaders begin using basic cash budgets (forecasts) in Stage II (survival), and by Stage III (success), business leaders use formal planning and operating budgets. Churchill and Lewis theorized that operational and strategic planning, budgeting, and control are critical in Stage IV (take-off). In Stage V (resource maturity), budgets and controls are important but require less managerial emphasis.

One of the propositions in Churchill and Lewis's (1983) theory is that the level of budget complexity and control increases as a small business grows through the five stages of development. Therefore, as a small business progresses through the stages of growth, the usage, complexity, and relative importance of budgets for planning and

control purposes should change. I selected three predictor variables based on one of Churchill and Lewis's propositions. According to the theory, one expects to see a significant and positive relationship between the predictor variables (budget planning, budget control, and age of the business) and the criterion variable (financial performance).

### **Operational Definitions**

The focus of this study was budgets and small businesses. Some of the terms may be unfamiliar or unclear to the reader. Below are the technical and contextual definitions of the terms used in this study.

*Budget control:* Budget control is the process of comparing budgeted plans and standards to actual financial results, analyzing variances, and taking corrective action (Bedford, 2015).

*Budget planning:* Budget planning is the process of using budgets to develop financial forecasts, which can include cash budgets, sales budgets, operational budgets, capital budgets, strategic budgets, and budgeted financial statements (Bedford, 2015; Sengul & Gimeno, 2013).

*Small business:* Small businesses, as used in this and similar studies, are businesses with fewer than 500 employees (Haltiwanger et al., 2013; U.S. Census Bureau, 2017; U.S. Small Business Administration, 2014).

*Small and medium enterprises (SMEs):* Small and medium enterprises are those businesses as commonly measured in studies outside the United States, particularly Europe, with fewer than 250 employees (Hilmersson, 2014).

## **Assumptions, Limitations, and Delimitations**

Researchers acknowledge study assumptions, limitations, and delimitations to provide the reader with the information necessary to enhance understanding, credibility, and transparency of a study. Assumptions are the beliefs a researcher holds as true without offering proof (Nkwake & Morrow, 2016). Limitations are uncontrollable threats to the internal validity and results of the study (Brutus, Aguinis, & Wassmer, 2013). Delimitations are the researcher's choices of boundaries to limit the scope of the study (Newman, Hitchcock, & Newman, 2015). The following is a discussion of the assumptions, limitations, and delimitations applicable to this study.

### **Assumptions**

I based the study on three assumptions. The primary assumption was that small business leaders possess sufficient knowledge of their business and its budgeting process. An adequate understanding of the business and budget is important to respond accurately to the survey questions and provide information about the organization's business and budget. A related assumption was that business leaders provide objective and truthful answers to survey questions. The final assumption was that financial performance, such as sales or profit, are proxies for success and growth (Parry, 2015).

### **Limitations**

There were four potential limitations to the study. First, because the study involved responses from surveys, there could have been self-report bias (Su, Baird, & Schoch, 2015). For example, a business owner could have reported business conditions that were not accurate. Second, the study may not have reflected a representative sample

of businesses in all stages of maturity. Specifically, there may have been a lack of businesses in the declining stage (Su et al., 2015). Third, other factors besides or in addition to the predictor variables in this study may have affected the criterion variable, financial performance (see Kung, Huang, & Cheng, 2013). Fourth, correlation does not equate to causation (Johnson et al., 2013). Therefore, readers cannot make inferences from the results of this study regarding the causes of financial performance.

### **Delimitations**

There were two delimitations in this study. First, I included small businesses as defined by the U.S. Census Bureau (2017) and U.S. Small Business Administration (2014): those with fewer than 500 employees. Second, the study involved small business owners or managers in the Midwest region of the United States who volunteered to participate in SurveyMonkey's Contribute Panel. This group provided easy access to a large pool of businesses in the region. The selection of participants from this group was a form of convenience sampling (see Landers & Behrend, 2015).

### **Significance of the Study**

The findings, conclusions, and recommendations stemming from this study are of potential value to businesses in general. Over 390,000 businesses failed in the United States in 2012 (U.S. Census Bureau, 2017). Business leaders could prevent business failures through better planning (U.S. Small Business Administration, 2015). The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. A deeper understanding of the relationship between

budget planning, budget control, the age of the business, and financial performance might improve the survivability of small businesses.

### **Contribution to Business Practice**

Leaders of small businesses may use the results of the study to improve business practices. Poor financial management, including the lack of budget use for planning and control, often leads to poor financial performance and eventual business failure (Karadag, 2015). Understanding the relationship between budgets, the age of the business, and financial performance may help leaders improve their budgeting process and increase the likelihood of success of small businesses.

### **Implications for Social Change**

The results of the study may contribute to positive social change. Nearly half of the workforce, or nearly 55 million workers, work for small businesses (U.S. Small Business Administration, 2014). The 390,000 business failures in 2014 represented 7.7% of all businesses in the United States and affected over 2.3 million jobs (U.S. Census Bureau, 2017). By helping leaders enhance the financial health of small businesses, the study results may be useful to help small business leaders reduce business failures and job losses. Stronger small businesses and more jobs may help to improve the economic health of local communities.

### **A Review of the Professional and Academic Literature**

The following literature review contains a critical analysis and synthesis of extant literature related to the theoretical framework and the study's variables (budget planning, budget control, business age, and financial performance of small businesses). The

literature review contains the most current literature, as well as key seminal and historical literature, on these topics. The reviewed literature includes journal articles, books, dissertations, and reports from governmental and other organizations.

A search of the literature on the topic involved key words related to the variables in the study. The initial search within databases began with key word search combinations of the terms *budget*, *performance*, and *small business*. Based on the results of these database searches and reading articles, I expanded my search using author-supplied key words and database subject terms. Table 1 presents a representative list of initial and additional variations and terms used when searching the literature.

Table 1

*Terms Used in Literature Review Search*

Initial term	Subsequent terms
Budget	Budgeting, beyond budgeting, better budgeting, capital budget, cash budget, plan, financial plan, business plan, planning, forecast, target, flexible budget, decision-making, resource allocation, control, management control, management control system (MCS), managerial accounting, managerial accounting system (MAS), expense or expenditure control, variance, evaluation
Performance	Financial performance, firm performance, business failure, organizational performance, earnings, profitability, success, growth, age, stage of growth, firm size, high growth, business stage
Small business	Small and medium enterprise (SME), small firm, entrepreneur, microbusiness, microenterprise, startup

My search consisted of queries in business and management academic databases including Business Source Complete, ABI/INFORM Complete, Emerald Management, SAGE Premier, and Elsevier ScienceDirect Business Management and Accounting. My search also involved ProQuest Central, Academic Search Complete, and Google Scholar.

Another technique used for searching the literature was to investigate the suggested related articles during my database searches. Finally, I used the bibliographies of studies and articles to search for related literature and check for references to authors who cited articles found in my search. The literature review contains a total of 76 references to articles, reports, and seminal works. Ninety percent, or 70 sources, of these references were from peer-reviewed sources with 85.5%, or 65 sources, published since 2013, which was within 5 years of the anticipated completion of the study.

The organization of the literature review is as follows. After a restatement of the purpose of the study and hypotheses, I describe the theoretical framework underlying the study, along with related theories. Next is a discussion of each of the variables in the study, beginning with the predictor variables (budget planning, budget control, and business age) and then the criterion variable (financial performance). The final section of the literature review is a synthesis of the variables.

### **Application to the Applied Business Problem**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The null and alternative hypotheses are as follows:

- Null hypothesis ( $H_0$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses does not significantly predict financial performance.



- Alternative hypothesis ( $H_a$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses significantly predicts financial performance.

### **Theoretical Framework**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. I used the model Churchill and Lewis (1983) developed as the theoretical framework for this study. A discussion of other theories follows.

Churchill and Lewis (1983) developed a theory to explain the relative importance of five management factors (managerial style, organizational structure, extent of formal systems, major strategic goals, and owner involvement in the business) in stages of the business. Churchill and Lewis focused on small businesses and based their theory on the size and age of the business through five stages of development (existence, survival, success, take-off, and resource maturity). The factor of Churchill and Lewis's theory pertinent to this study was the extent of formal systems, which involves the organization.

One of the propositions of Churchill and Lewis's (1983) theory is that the level of budget complexity and control increases as the company progresses through the five stages of development. In Stage I (existence), businesses are beginning their existence, and formal management systems are typically nonexistent. Leaders begin to use basic cash budgets as a critical form of forecasting in Stage II (survival). By Stage III (success), formal planning and operating budgets are in full use. Churchill and Lewis

posited that operational and strategic planning, budgeting, and control are critical in Stage IV (take-off). By Stage V (resource maturity), budgets and controls are important but require less leadership emphasis. Therefore, as a small business progresses through the stages of growth, the usage, complexity, and relative importance of budgets for planning and control purposes should change.

Complexity of budget planning involves using increasingly advanced forms and types of budgeting. As previously discussed, in Stage I (existence) of Churchill and Lewis's (1983) model, businesses are beginning their existence, and formal management systems, including any formal (written) budgets, are typically nonexistent. Small business leaders begin to implement basic cash budgets as a critical form of forecasting and cash planning in Stage II (survival). By Stage III (success), formal planning and operating budgets are in full use. Churchill and Lewis posited that strategic planning and budgeting are critical in Stage IV (take-off). Therefore, greater use of these budgets indicates advanced stages of organizational growth.

In a similar way, the complexity of budget control involves greater frequency and types of controls involving budgets. As indicated earlier, in Stage I of Churchill and Lewis's (1983) model, formal management systems, including any type or review of formal budgets, are normally absent. Controls formally appear as leaders begin to implement cash and operating budgets in Stages II and III to review and control cash management and operating revenues and expenses. However, Churchill and Lewis suggested that controls are most important in Stages IV and V where the increasing use

and complexity of budget controls are crucial to managing resources. Therefore, greater complexity of budget control indicates more advanced stages of organizational growth.

Researchers offer other theories to explain the life cycle or stages of growth of businesses. Similar to Church and Lewis's (1983) theory, Lippitt and Schmidt (1967) posited that organizations go through three life cycle stages of growth: birth, youth, and maturity (and potentially death). Lippitt and Schmidt argued that nonfinancial crises occur as organizations go through these stages. Lippitt and Schmidt also posited that how leaders handle these crises determines the outcome. Although Lippitt and Schmidt's theory focused on the role and attributes of the leader, their early work informs later theories on stages of organizational growth.

About the same time as Churchill and Lewis (1983), Miller and Friesen (1984) developed a similar theory using a longitudinal study to examine four construct variables (environment, strategy, structure, and decision-making) of 36 firms over an extended period (more than 20 years) across five organizational life cycle stages. Miller and Friesen developed their stages based on extensive extant literature, which included the five phases of birth, growth, maturity, revival, and decline. The results of Miller and Friesen's study confirmed existing theories that distinct differences in variables exist between stages. Miller and Friesen examined factors for planning and management control, and their study results indicated these factors become more complex and mature as an organization moves from one stage to the next. However, unlike Churchill and Lewis's theory, Miller and Friesen included all sizes of firms in their study, not just small businesses.

Su et al. (2015) used Miller and Friesen's (1984) theory in their study of the moderating role of life cycle stage on the relationship between the type of management control as defined by Simons (1994) (interactive or diagnostic) and organizational performance. Su et al. studied 343 manufacturing firms for their correlational study based on Miller and Friesen's five stages of growth because the theory addressed firms of all sizes. Su et al. found a significant relationship between control type and performance in the growth, maturity, and maturity stages, suggesting that the type of control is more appropriate in some stages than others. In a similar way, Bedford and Malmi (2015) incorporated Miller and Friesen's theory in their study of 400 medium and large firms to develop a taxonomy of five combinations of controls. Bedford and Malmi also discussed other studies of management controls that involved life cycle stages and considered age and size, indicating their relevance to research on the use of budgets in different growth stages.

Lester, Parnell, and Carraher (2003) developed and empirically tested a model to explain the stages of an organization's life cycle. Lester et al. based their model on the one Miller and Friesen (1984) developed. Lester et al. argued that their five stage model provides a more accurate picture of life cycle stages than previous models and applies to all organizations, not just some (as with Churchill and Lewis's model, for example). Lipi (2013) used Lester et al.'s theory to examine the relationship between the life cycle stages of growth of small businesses and sources of financing of 48 firms in Albania. Because the budget is a common management control (Chenhall, 2003), a theoretical framework that explains management controls over different stages of growth is useful.

Numerous researchers have studied management controls over the life of businesses. For example, Sandelin (2008) conducted a longitudinal case study of a small international telecommunications company by examining management controls within the company at two points of time: in the early years of growth and later as the company and industry matured. Sandelin compared and contrasted the management control packages of the company during these two time frames. Henttu-Aho and Järvinen (2013), in a case study, explored how stages of institutional change affected primary budget functions. Similarly, Soin and Collier (2013) discussed how organizational changes affect management controls.

Other researchers have focused on specific groups when studying stages of growth. For instance, Hölzl (2014) studied Austrian firms from 1985 to 2006 to examine the performance of gazelles (fast-growing businesses) after their initial fast-growth period. Hölzl sought to answer the question of whether fast growth increases the likelihood of survival, persistence, and subsequent growth. Hölzl grouped the businesses into three categories for his analysis: high-growth firms (as defined by the European Organization for Economic Cooperation and Development), high Birch firms (an index to measure new job creation), and a control group. The results showed the significance of various stages of growth and different groups of growth firms.

Dalborg (2015) used a different approach to study and explain the stages of growth of businesses. Dalborg's research focused on evaluating other methods of growth measurement and life cycles than the traditional methods Churchill and Lewis (1983) and others used. Dalborg proposed a qualitative measure of growth and stages, citing research

that stages of growth are not clearly delineated. According to Dalborg, most businesses do not progress through stages as theorized, and business owners (especially women) have other motivations for business growth besides more employees and sales. Using Maslow's hierarchy of needs, Dalborg classified women-owned businesses based on qualitative stages of growth (based on Maslow's hierarchy of needs): survival, stability, work creation, appreciation, and personal development. However, Dalborg's theory focused on women-owned business and did not consider other types of owners or businesses.

Although the theories described differ, a common theme is that management controls vary depending on the organization's stage of growth. However, researchers disagree on the number and type of stages, as well as the size or type of organizations (Gupta, Guha, & Krishnaswami, 2013). Because Churchill and Lewis's (1983) theory applies specifically to small businesses, their model was most appropriate to my study. Also, Churchill and Lewis specifically described the role of management controls, including budgets, in each growth stage.

### **Budget Planning**

I used budget planning as one of the predictor variables in this study. Budget planning involves the use of budgets to develop financial forecasts, which can include cash budgets, sales budgets, operational budgets, capital budgets, strategic budgets, and budgeted financial statements (Bedford, 2015; Sengul & Gimeno, 2013; Umaphy, 1987). Planning is an important function of business management, and budgets are the primary planning tool used in most organizations.

Planning helps leaders develop an appropriate course of action in the face of uncertainty (Brinckmann & Kim, 2015). Planning is beneficial and important for businesses' performance (Brinckmann & Kim, 2015; Hofer, Eisl, & Mayr, 2015; Karadag, 2015). The U.S. Small Business Administration (2015) attributes many business failures to poor business planning. In a study by Lee and Cobia (2013), planning was one of the two primary management accounting aspects that improved decision-making. These and other studies and literature point to the central role of planning and the impact of planning on an organization's success.

A review of the literature indicates a close association between budgets and planning. In literature, budgets and plans are often interchangeable (e.g., Gorzeń-Mitka, 2015; Hofer et al., 2015; Länsiluoto, Varamäki, Laitinen, Viljamaa, & Tall, 2015). One of the most common purposes of budgets is for planning. The budget is the main tool most organizations use for planning (Pietrzak, 2014). As previously discussed, management controls also include budgets (Chenhall, 2003). Budgets are not only a part of management control systems, but are a central part of many organizations' planning processes (Samuelsson et al., 2016). Samuelsson et al. (2016) stated that the primary function of budgeting is for planning, to include identifying and efficiently using required resources.

A review of the budget literature demonstrates the wide extent of budget use for planning purposes. For example, Umapathy (1987) conducted a study of 402 medium and large companies in the United States, in part to determine whether various budget practices, including planning, of financially successful firms differed significantly from

other firms. Umapathy found that the use of budgets for planning and coordination had a positive effect on financial performance. Libby and Lindsay (2010) conducted a study of North American firms to update existing literature on current budget practices, evaluate contemporary criticisms of budgeting, and identify trends in budget practices, which included aspects of strategy and planning. Libby and Lindsay found that nearly all the respondents indicated they have and would continue to use budgets for planning purposes. The study by Enqvist et al. (2014) on the impact of working capital management on profitability included cash budgets as the primary tool for cash planning. Enqvist et al. found a relationship between working capital management and profitability, suggesting business leaders should incorporate working capital (cash) management into their financial plans.

More recently, researchers have studied the use of budgets for planning. De Baerdemaeker and Bruggeman (2015) used structural equation modeling to examine the impact of participative strategic planning on budgetary slack. One observation of De Baerdemaeker and Bruggeman's study was the extensive use of budgets in strategic planning. Arnold and Artz (2015) examined the role of target difficulty and target adjustments (flexibility) on firms' financial performance. Arnold and Artz found that more challenging budget targets correlate with increased financial performance, indicating that leaders' use of targets primarily for decision-making mitigated the effects of flexible targets. Arnold and Artz's study also reinforces the use of budgets for planning purposes. Arnold and Gillenkirch (2015) conducted an experimental study to examine the effects on budget negotiations when a conflict exists between budget use for



planning and performance evaluation. The results of Arnold and Gillenkirch's study partially explained the common use of only one budget for both planning and control purposes in practice and added to scant research on the relationship between planning and control functions of budgeting. Amans, Mazars-Chapelon, and Villesèque-Dubus (2015) studied two nonprofit performing arts organizations (theaters) to understand how the usage of budgets, such as for planning, control, monitoring, and evaluation, varies within different complex organizations. The study by Amans, Mazars-Chapelon, and Villesèque-Dubus underscored the inherent use of budgets for planning. Likewise, Davila, Foster, and Jia (2014) studied an international sample of 66 young firms to examine the relationship between the adoption of management control systems (financial and strategic planning, financial evaluation, and sales targets) and firms' value. Davila et al. found that some management control systems, including budgets, are basic and adopted by nearly all companies. Of note, Davila et al. specifically identified budgets for financial planning and evaluation (control) in their study. In a case study of two multinational firms that abandoned traditional budgeting, Bourmistrov and Kaarbøe (2013) found that unbundling the budget functions (planning, forecasting, control, and evaluation) allowed leaders to use new forecasting processes to establish stretch goals and improve strategic decision-making. The study by Bourmistrov and Kaarbøe also suggests the intrinsic nature of budgets and planning and the relationship between budget planning and performance. Likewise, Henttu-Aho and Järvinen (2013) studied five industrial companies (paper and steel) that abandoned or considerably changed traditional budget practices and found that

the leaders continued to use budget functions such as planning and control to some extent.

Other researchers studied the relationship of budgets for planning and performance of the business. For example, Samuelsson et al. (2016) observed that using budgets for planning positively affected performance in their study of formal accounting planning in small and medium enterprises. In addition, Kung et al. (2013) studied 132 Taiwanese manufacturing firms to examine the relationship between two aspects of budgeting (budget emphasis and budget planning model) and organizational performance. The model indicated a statistically significant correlation between budget planning (tight or flexible) and organizational performance.

In the studies cited above, researchers measured various aspects of planning in their organizations, typically using Likert-type items in the survey instruments. In some cases, researchers used a single measure, while in other studies there were many facets of planning. For instance, Arnold and Gillenkirch (2015) measured only the level of budget participation, as did De Baerdemaeker and Bruggeman (2015). Kung et al. (2013) also measured the level of participation in budgets, but also measured the amount of budget detail and extent that organizational leaders used budgets to communicate goals and targets. In a similar way, Arnold and Artz (2015) measured the amount of flexibility in the budget, the level of difficulty of budget targets, and to what extent the organization used budgets for planning, coordination, and resource allocation. Libby and Lindsay (2010) measured the time spent preparing budgets, level of detail, and extent of changes

in the budget. Davila et al. (2014) measured the level of formality in the budget process and types of plans developed, including financial, strategic, and human resource plans.

Still other researchers used a greater number of items to examine budget planning. For instance, Umapathy (1987) studied the extent that managers used budgets for planning and coordination; planning horizon and time spent preparing budgets; difficulty of targets; level of formality and detail of the budget and budget process; level of participation; extent of budget revisions; and extent that leaders used flexible, rolling, and contingency budgets. Like the Arnold and Artz (2015) study, Umapathy also measured whether organizations had separate budgets for different purposes, to include planning and control (evaluation). In the small business survey on budgets, the National Federation of Independent Businesses (NFIB) (2007) used Likert-type items to measure the type, frequency, time spent, and level of detail of budget preparation. The NFIB survey also measured the sources of information for budget preparation, level of flexibility in the budget, and complexity of the budget. As evidenced by these and other studies, there is no standard measure for budget planning.

As mentioned earlier in this section, there is a positive connection between planning and organizational performance. As noted in the theoretical framework section, there is also a relationship between the maturity of an organization's management controls systems, including budgets, and the organization's stage of growth (Churchill & Lewis, 1983). Therefore, in my study, I measured budget planning by determining the level of maturity of budgets used in organizations. Consistent with the measures of

budget planning used by Kung et al. (2013), the NFIB (2007), and Umapathy (1987), my study included a survey item to measure the level of maturity of budget planning.

Complexity of budget planning involves using increasingly advanced forms and types of budgets. As previously discussed, in Stage I (existence) of Churchill and Lewis's (1983) model, businesses are beginning their existence and formal management systems, including any type of formal (written) budgets, are typically nonexistent. Small business leaders begin to implement basic cash budgets as a critical form of forecasting and cash planning in Stage II (survival). By Stage III (success), formal planning and operating budgets are in full use. Churchill and Lewis posited that strategic planning and budgeting are critical in Stage IV (take-off). Budgets associated with higher levels of maturity would, therefore, include capital budgets and long-range budgets (Umapathy, 1987). Therefore, consistent with Churchill and Lewis, greater use of these budgets indicates advanced stages of organizational growth.

### **Budget Control**

The second predictor variable in this study was budget control. In the broader context of management controls and management control systems (MCS), controls are manifest in many aspects. In the context of budgeting, controls have a narrower definition. Budget control is the process of comparing budgeted plans and standards to actual financial results, analyzing variances, and taking corrective action (Bedford, 2015; Umapathy, 1987). A background and discussion of both views of controls follow.

Control, as broadly defined in Simons' (1994) seminal work, involves the rules, operating procedures, and routines that guide an activity (Chenhall, 2003). Based on a

longitudinal study of top managers in their first 18 months, Simons identified four categories of control systems: belief, boundary, diagnostic, and interactive. Simons found that in all cases, control systems were significant tools leaders used to implement a new strategy. Managers used control systems to formalize beliefs, establish strategic boundaries, define and measure crucial variables of performance, and facilitate dialogue about strategic uncertainty. These managers also used control systems to set goals for strategy implementation and to communicate and maintain focus on new strategic initiatives. However, Simons provided little detail of specific controls and few examples of control tools, including budgets.

This lack of detail on controls and their measurement was a common feature in the majority of the literature on controls. For example, Lee and Cobia (2013) studied 4,858 small and medium enterprises in the United Kingdom to evaluate perceived barriers to growth. In their case study, Lee and Cobia described how a small but growing company improved decision-making by adopting management accounting practices as part of a management control system. Two primary management accounting aspects discussed were planning and control, albeit with little detail. Similarly, in a longitudinal case study, Zhong (2014) found that financial controls were important for the success of small businesses. However, Zhong did not measure or describe the controls in detail. Likewise, in a literature review of quantitative management accounting studies, Shields (2015) found that planning and control are common elements of MCS. However, the article did not include measurements of controls or how organizations implement specific controls. Similarly, the case studies by Bourmistrov and Kaarbøe (2013) and Henttu-Aho

and Järvinen (2013) involved the control function of budgets, but neither included a detailed description or measurement of controls.

The lack of specificity of how leaders use budgets for control is evident in other literature as well. For instance, Bedford (2015) studied the effect of MCS on firm performance using Simons' (1994) levers of control. Bedford used cluster and regression analyses of the survey results of 400 firms to examine how firms implemented diagnostic and interactive controls through budgets and performance management systems. However, like Simons, Bedford did not examine how managers used budgets for control. This is also the case in other literature involving budgets as a form of control (e.g., Amans et al., 2015; Grabner & Moers, 2013; Kruis, Speklé, & Widener, 2016; Kung et al., 2013; Li, Tang, Okano, & Gao, 2013). Li et al. (2013) identified budgets as a major type of control, and that the types and intensity of controls evolve over time. However, as other researchers discussed, Li et al. did not provide details of how managers use budgets for control.

In contrast, Anderson, Christ, Dekker, and Sedatole (2014) identified 31 specific controls used in strategic alliances in their study. Anderson et al. found that companies ameliorated compliance and regulations risks through informal controls while addressing relationship controls primarily through explicit exit agreements. Firms used careful partner selection and agreements on contract outcomes as controls to address performance risks. However, Anderson et al. did not specifically identify budgets as a form of control in their study. In a similar way, Sanger (2013) identified control measures such as comparisons of actual to planned performance and industry standards as a best

practice in high-performing municipalities, although Sanger did not specifically mention budgets.

Still other researchers defined, albeit somewhat broad, how budgets and controls vary over stages of organizational growth. For example, Churchill and Lewis (1983) indicated that budget complexity and control increase over the five stages of growth. In a similar way, Sandelin (2008) conducted a longitudinal case study of a small international telecommunications company by examining management controls during the early years of growth and then later as the company and industry matured. Sandelin found that in early stages of a firm, leaders' use of budgets for control was less formal than in later stages. Su et al. (2015) also performed a correlational study on the effect of a firm's stage of growth on management control and firm performance. Using Simons' (1994) interactive and diagnostic types of controls, Su et al. found a significant relationship between the control type and performance during the growth and maturity stages. In a similar way, Chong and Mahama (2014) used Simons' interactive and diagnostic types of controls to examine the role of budgets in team effectiveness. In each of the studies discussed, the researchers found that controls, including budgets, changed over time as the organization matured. However, in the studies cited, the researchers did not measure or provide details of how managers use budgets for control.

Other researchers specifically examined control in their studies involving the control function of budgets. For example, Umapathy (1987) measured several aspects related to budget control in his comprehensive and seminal study on budgeting in U.S. firms. In the survey, Umapathy asked senior leaders to assess the complexity of their

budget process, frequency of budget reviews, extent of budget to actual comparisons, and level of corrective action taken based on those reviews. Umapathy found that complex firms used more budgetary controls than simpler firms, indicating that as a firm grows, its leaders use more budget control tools. Similar to Umapathy's study, Jindrichovska (2013) conducted a synthesis of 15 studies on financial management in small and medium enterprises. The principal theme of the selected studies is that poor financial management was a primary cause of problems in small and medium enterprises and that financial management was critical to growth. Among the recommendations for healthy financial management of small and medium enterprises based on reviewed literature, Jindrichovska suggested that managers conduct frequent (monthly) reviews, compare actual performance to budgeted/targeted amounts, and take corrective action as needed. Likewise, López and Hiebl (2015) reviewed the literature over a 20-year period to understand the importance of and common problems in management accounting practices in small and medium enterprises. One conclusion from their research is that management accounting, to include budgets, improved controlling functions in small and medium enterprises and resulted in increased overall business performance. Similarly, in a study of performance measurement systems, Cooper and Ezzamel (2013) found that one of the main financial measures used by an organization was a comparison of actual results to budget targets. Lämsiluoto et al. (2015) also examined the relationship between control systems, which included budgets, and financial performance involving small business transfers.



Other researchers have defined or examined budget control by the degree that business leaders used variance analysis. For example, Davila et al. (2014) studied an international sample of 66 young companies to examine the relationship between the adoption of MCS and the firms' value. The results of Davila et al.'s study indicated some MCS are basic and adopted by nearly all companies. These include (by function, not specific system) financial and strategic planning, financial evaluation, and sales targets. Part of financial evaluation was the degree to which organizations used budget variances as a means of control and evaluation. Davila et al.'s study also supports the theory that adopting more formal MCS results in better decision-making and indicates growth potential, which increases a company's value. Similarly, Chenhall and Moers (2015) discussed the use of budget variances and analysis in simple MCS to attain organizational goals.

Other aspects of budget controls researchers studied include the level of detail, tightness of controls, and trend analysis. Both Gates and Germain (2015) and Bedford and Malmi (2015) measured budget control by the level of detail in their studies. According to these researchers and others, more detail in budgets (and their subsequent review) equated to greater control. Closely related to the level of detail is whether budgets are loose or tight. The level of tightness relates to how closely an organization adheres to its budget, which is another means of budget control (Gates & Germain, 2015). Other studies involved tightness of controls, although the researchers did not specifically identify budgets as the control mechanism (e.g., Li et al., 2013; Sandelin,

2008). Finally, Karadag (2015) identified feedback and trend analysis as forms of control, though Karadag did not specifically mention budgets.

Based on the review of the literature on the control function of budgets, I measured budget control based on studies by the NFIB (2007) and Umapathy (1987). Therefore, my study involved the measurement of budget control by measuring the frequency of budget reviews. Consistent with the theory by Churchill and Lewis (1983), greater use of these tools indicates more advanced stages of organizational growth.

### **Business Age**

The third and final predictor variable in my study was the age of the business. Researchers commonly use the age of the firm in studies, either as a variable or for demographic data. Also, there are theories and studies that indicate a relationship between the stage of the firm's growth and its age.

Many researchers include the firm's age in their studies as demographic information, along with other attributes of the firm such as size and industry. These researchers typically use age to verify that the sample is similar to the population or to compare their target population to other groups. For instance, Mason and Brown (2013) conducted a mixed-method study to understand the emergence of high-growth firms (HGFs), also known as gazelles. Mason and Brown noted that other studies indicated HGFs are heterogeneous regarding industry sector, age, and size, implying these factors may not be appropriate mediating variables related to growth. In a similar way, Hölzl (2014) studied Austrian firms from 1985 to 2006 to examine the performance of HGFs after their initial fast-growth period. Hölzl grouped the firms into three categories for his

analysis: HGFs, high Birch firms (an index to measure new job creation), and a control group (generated using a nonparametric preprocessing of the data by identifying similar companies in size, age, and industry). However, unlike the study by Mason and Brown, Hölzl found HGFs and high Birch firms have significantly better growth after their initial growth period than the control group, suggesting a relationship between age and growth.

Other researchers use the organization's age as a control variable in their studies, which is common in studies of small businesses (Lechner & Gudmundsson, 2014). For example, Verbeke and Yuan (2013) included the size and age of subsidiaries as control variables in their quantitative field study examining the effects of resource slack and availability on entrepreneurial activity. In a quantitative study of 335 firms, Lechner and Gudmundsson (2014) sought to understand how entrepreneurial facets affect the relationship between strategy and firm performance. Lechner and Gudmundsson included the size and age of the firms as control variables, along with entrepreneurs' age and education. Lechner and Gudmundsson noted a negative relationship between a firm's size and age and the risk of business failure.

In other studies, researchers use the firm's age as a dependent variable. For example, Uwonda, Okello, and Okello (2013) and Schofield (2015) performed studies of small businesses using the firms' age. Uwonda et al. used a cross-sectional study to examine cash flow practices of small and medium enterprises in Northern Uganda. Uwonda et al. surveyed 153 small and medium enterprises with at least five employees in the service sector to evaluate three cash flow constructs: cash flow planning, monitoring, and control. As part of their research, Uwonda et al. discussed the ability of these

variables to predict the age or size of the firm. Schofield studied 111 small businesses to examine the relationship between bootstrap financing (alternatives to traditional debt or equity), the size of the firm (measured by the number of employees), and the company's success, measured by the firm's age. Interestingly, Schofield noted the contradictory evidence in the literature regarding the relationship between a firm's size and age.

Still other researchers include the age of the firm as an independent variable. For example, Moores and Yuen (2001) conducted a mixed-methods study to determine whether management accounting systems (MAS) differ across life cycle stages and what patterns emerge. Moores and Yuen found little use of MAS during the birth stage, but a significant increase in MAS usage and formality during the growth stage. MAS formality decreased as firms entered the maturity stage, increased during revival, and decreased significantly in decline. In their study, Moores and Yuen used age and size as indicators of life cycle stages. Moores and Yuen performed a cluster analysis to group firms into stages using these variables, indicating the relationship between age and stages of growth.

In a similar way, Bedford and Malmi (2015) used a two-phased approach to develop a taxonomy of five combinations of management controls. Bedford and Malmi included age as a dependent variable, measuring age as a dichotomous variable (early stage firms fewer than 20 years old or mature firms greater than 20 years old). Using empirical data from a survey of 400 medium and large firms, Bedford and Malmi sought to determine the common configurations of control that managers use in practice and the context associated with each combination. A cluster analysis resulted in five groupings of management controls, termed as simple, results, action, devolved, and hybrid. Bedford

and Malmi found a significant relationship between the size of the business and the type of controls used. Of note, Bedford and Malmi indicated this relationship was also similar for the age of the firm.

The use of age as a variable also appears in theories on life cycle stages of businesses, although there is a lack of agreement on the role of age. In their theory of stages of growth, Churchill and Lewis (1983) identified early stage firms as those which are small and young, while firms in later stages of growth are large and mature. Churchill and Lewis made a clear connection between the stage of maturity and the age of the firm as it progresses through the stages of the life cycle. However, in the theory developed by Miller and Friesen (1984), the link between age and stage of growth is weaker. Miller and Friesen argued that a firm's complexity is due more to growth than maturity and that age alone is not an indication of a firm's stage. Similarly, Lester et al. (2003) developed and empirically tested a model to explain the stages of an organization's life cycle. Lester et al. argued that their five-stage model provides a more accurate picture of life cycle stages than previous models and applies to all organizations, not just some (as with Churchill and Lewis's model, for example, which focused on small businesses). Of note, Lester et al. indicated that the age of the organization and life cycle stage do not always correlate, although the authors did not provide support for this assertion.

In this study, I used the age of the firm as a predictor variable. Using the firm's age as a predictor variable is consistent with the theory of Churchill and Lewis (1983) and studies by Moores and Yuen (2001) and Bedford and Malmi (2015). The study involved a measure of firms' age using a survey question to determine the number of

years the business has been in existence, consistent with measurements used by the U.S. Census Bureau (2017) and Moores and Yuen.

### **Financial Performance**

The criterion variable in this study was financial performance, as measured by sales and profit growth. Financial performance is one form of organizational performance, a criterion variable that researchers should use in management accounting research (Chenhall, 2003). Several different metrics appear in the literature to describe or measure the financial performance of organizations. One measurement is Tobin's  $q$ , which is a composite measure of the ratio of the market value of a company's assets as compared to the replacement value of those assets (Kroes & Manikas, 2014). Specifically, Tobin's  $q$  is the ratio of market capitalization, working capital, and long-term debt to total assets (Chen & Jermias, 2014). Tobin's  $q$  is a useful measure because the metric represents the potential for growth and profit (Sengul & Gimeno, 2013). For instance, Kroes and Manikas (2014) included Tobin's  $q$  in their quantitative study to examine the effect of changes in cash flows on financial performance. Kroes and Manikas found that a change in the operating cash cycle significantly correlated to improved financial performance. Likewise, Park and Jang (2013) used Tobin's  $q$  in a quantitative study of the relationship between capital structure (debt versus equity), free cash flow, investment diversification, and firm performance (measured by Tobin's  $q$ ) within the U.S. restaurant industry. The results of the study indicated a significant positive relationship between financial leverage and firm performance but a significant negative relationship between free cash flow and firm performance, especially with

unrelated diversification of investments. Chen and Jermias (2014) also used Tobin's  $q$  in their quantitative study of 194 U.S. firms examining the effect of performance-linked compensation and strategy on financial performance. In each of these studies, researchers used Tobin's  $q$  to study financial performance.

Although researchers widely use Tobin's  $q$  as a comprehensive measure of financial performance (Kroes & Manikas, 2014), the measure has limitations. For instance, calculating Tobin's  $q$  requires market data on stock prices, so the company must be a corporation and stock price readily available. In addition, other components of Tobin's  $q$ , such as detailed information on liabilities and assets, must be obtainable, such as in the study conducted by Girod and Whittington (2016). In the cited studies and other studies where researchers have used Tobin's  $q$ , public data were available. For example, Chen and Jermias (2014) used publicly available data on U.S. firms listed in the Compustat S&P 500. However, small businesses are often sole proprietorships or partnerships with limited public financial information, preventing calculations for market capitalization needed in Tobin's  $q$  (Graham, Galbraith, & Stiles, 2014). Therefore, another measure for financial performance is necessary for studies involving small businesses.

Other common indicators of financial performance used by researchers, especially in studies of small businesses, involve the level of sales or profit. For example, Bedford (2015) included relative sales growth as a measure of performance in a quantitative study examining the effect of management control systems on firm performance. Likewise, Abdallah and Alnamri (2015) used sales and profit to study financial performance, as did

Haron, Yahya, and Haron (2014). The results of the study by Haron et al. indicated a significant positive correlation between cash flow information and profitability. Hölzl (2014) used sales growth to examine the performance of high growth firms and determine whether fast growth increases the likelihood of survival, persistence, and subsequent growth. Hölzl found high growth firms and high Birch firms have significantly better growth in terms of sales after their initial growth period than the control group. While Berrone, Gertel, Giuliadori, Bernard, and Meiners (2014) used sales growth, they also studied financial performance using earnings growth in their quantitative study of the factors associated with successful performance of microbusinesses in Argentina. The results of Berrone et al.'s study indicated that human capital (education level and dedication), innovation, personal capital, and voluntary startup positively correlated with business success as measured by profit growth, whereas public funding assistance and being unemployed (compulsory startup) negatively affected performance.

Other studies using profit or profit growth include Elhamma's (2015) research on the relationship between the extent of budget evaluations and organizational performance. Elhamma used profitability, along with competitiveness and productivity, to examine performance in his quantitative study of Moroccan firms, most of which were small businesses. The study results showed a positive correlation between budget evaluation and firm performance as measured by profitability, competitiveness, and productivity. Likewise, Senderovitz, Klyver, and Steffens (2015) used profit to measure financial performance in their longitudinal quantitative study of 964 Danish firms examining the relationship between growth and profitability in high growth firms.



Senderovitz et al. found a statistically significant relationship between growth and profitability. Profit was also the measure of performance used by Omri, Frikha, and Bouraoui (2015) in their study examining the relationship between human, social, and financial capital and the financial success of small businesses in Tunisia. Lechner and Gudmundsson (2014) used profitability in a composite measure for firm performance in their study of 335 small firms to understand how entrepreneurial facets affect the relationship between strategy and firm performance. Finally, Stam, Arzlanian, and Elfring (2014) used profit as one of three variables to measure financial performance in their meta-analysis study of the effect of social capital in the entrepreneurial process of 61 small firms. Others have used profit as the measure for financial performance to develop models, such as Halabí and Lussier's (2014) research based on a survey of 403 small businesses in Chile.

Some researchers use both sales and profit to study performance. For instance, Lipi (2013) used sales and profit growth in a quantitative study of 48 Albanian firms to examine the relationship between the life cycle stages of growth of small businesses and sources of financing. In Lipi's study, 58% of firms remained in the existence stage during the entire 4-year period of the study even though the average growth rate was 26%. Rahman, Amran, Ahmad, and Taghizadeh (2015) also used sales and profit growth to examine the relationships between entrepreneurial competencies, business performance, and the level of support provided by large private organizations to 134 small Bengali firms. Among the results, Rahman et al.'s study showed a significant relationship between entrepreneurial competencies and financial performance. Similarly, Bamiatzi

and Kirchmaier (2014) used sales and profit growth in their case study to understand strategies of high growth small businesses that are successful even when the overall industry is declining. Other literature also indicates that sales, profit, and growth are common measures of organizational performance in research on small businesses (e.g., Karadag, 2015; Mazzarol, 2014; Patten & Patten, 2014). Therefore, sales and profit growth are suitable proxies to measure the financial performance of small businesses.

A related aspect of financial performance in studies is the method for collecting data and measuring sales and profit growth in small businesses. Researchers often use financial data from secondary sources such as public records to obtain and calculate sales, profit, and growth. For example, researchers studying publicly traded firms can rely on financial data in mandatory filings with the Securities and Exchange Commission (e.g., Chen & Jermias, 2014; Kroes & Manikas, 2014; Park & Jang, 2013; Senderovitz et al., 2015). In other studies, public data was available for all businesses due to government regulations, such as studies involving European firms (e.g., Bamiatzi & Kirchmaier, 2014; Baños-Caballero, García-Teruel, & Martínez-Solano, 2014; Hilmersson, 2014; Hölzl, 2014). However, as previously noted, public data is not always available for private firms, especially small businesses (Berrone et al., 2014). Therefore, it is common in studies of small businesses for researchers to collect financial information using surveys, and owners or managers provide requested financial information (Mazzarol, 2014).

Another common approach in research is to ask small business leaders to provide an assessment of their businesses' financial performance using a Likert-type item instead

of providing financial data. For example, Halabí and Lussier (2014), Länsiluoto et al. (2015), and Umopathy (1987) used a survey in their studies to obtain business leaders' self-assessment of their businesses' relative profitability using a Likert-type item. The NFIB (2007) used a similar method to measure financial performance in their national small business poll on budgeting. Consistent with prior studies, Kung et al. (2013) used managers' self-evaluation of three factors (economic, market, and internal performance) to measure performance in their study on budgets using a Likert-type scale. Therefore, in this study, I used small business leaders' assessment of financial performance as measured by relative sales and profit growth over the past 3 years using a Likert-type item.

### **Budget Planning, Budget Control, Age of the Business, and Financial Performance**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. Planning is a critical function for the performance of a business (Brinckmann & Kim, 2015; Hofer et al., 2015; Karadag, 2015). The U.S. Small Business Administration (2015) attributes many business failures to poor business planning. Business leaders use budgets as a primary tool for planning (Pietrzak, 2014). Therefore, a relationship should exist between the level of budget planning and financial performance.

Control is a basic management function and, therefore, essential to an organization's success. Consistent with Churchill and Lewis's (1983) theory, greater use and complexity of budget controls indicates more advanced stages of organizational

growth. Su et al. (2015) found a significant relationship between controls and performance in the growth, maturity, and maturity stages of businesses. Consequently, a relationship should exist between the use and complexity of budget controls and performance. According to Churchill and Lewis, as a company progresses through the life cycles stages of growth, the level of budget complexity and control increase.

As a business grows older and matures, its budget processes should become more complex. As a result, there should be a relationship between the age of the firm and the complexity of its budget planning and control. Although many measures exist for financial performance, a common method in studies of small businesses is the business leader's assessment of financial performance as measured by relative sales growth and profit growth over time (e.g., Halabi & Lussier, 2014; Mazzarol, 2014; Stam et al., 2014).

### **Transition**

Section 1 began with a discussion of budgets as a management tool leaders can use to help their businesses succeed. However, small business leaders may lack knowledge about to what extent, if any, budget planning, budget control, and the age of the business predict financial performance. Therefore, I used a quantitative correlational study to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. According to Churchill and Lewis's (1983) theory on stages of business growth, a positive relationship should exist between the predictor variables of the study (budget planning, budget control, and age of the business) and the criterion variable (financial performance).

Section 2 begins with a description of the project, beginning with the role of the researcher and the participants in the study. Next, I describe the research method and design chosen, the population and sampling method, and the instrumentation of the study. Section 2 ends with a discussion of the data collection and data analysis process, as well as issues related to study validity. Section 3 contains the findings of the study and an application of the study to the professional practice and implications for social change. Section 3 also consists of recommendations for action and further research and personal reflections on the study.

## Section 2: The Project

This section begins with a restatement of the purpose of the study, followed by a description of the role of the researcher and the participants in the study. Next is a discussion of the research method and design used in the study, along with the population and sampling. Following a discussion of ethical research, I explain the instrumentation used in the study, methods of data collection and analysis, and the validity of the study.

### **Purpose Statement**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The predictor variables were budget planning, budget control, and the age of the business. The criterion variable was the financial performance of the business. The targeted population consisted of leaders of small businesses in the Midwest United States. The implication for positive social change includes the potential for more small business leaders to use budgets, increasing the likelihood that their businesses' financial performance may improve (U.S. Small Business Administration, 2015). Improved financial health of small businesses can help reduce business failures and job losses (Haltiwanger et al., 2013; U.S. Small Business Administration, 2015). Financially healthy small businesses enable business leaders to generate and sustain jobs, improving the economic health of local communities (Mason & Brown, 2013; U.S. Small Business Administration, 2015).

### **Role of the Researcher**

My role as the researcher of the quantitative study was to design the study, identify participants who met the criteria for the study, collect the data, and analyze the results. My role as the researcher in the data collection process was to achieve objectivity through independence of the participants of my quantitative study. Objectivity is a primary goal of positivist accounting research (Luft & Shields, 2014). Because my study was quantitative, there was less interaction with participants than in a qualitative study. My limited interaction with participants involved indirectly inviting participants to take a survey as described under Participants and Data Collection. My experience consists of over 15 years working with budgets, primarily in governmental and nonprofit organizations, which was the reason for my interest in this topic. Personal observations and awareness of struggling small businesses generated my interest in helping small business leaders succeed.

My role as the researcher was also to ensure that the study complies with ethical guidelines of the Belmont Report and institutional review board (IRB). Three primary areas of ethical conduct covered in the Belmont Report are the respect of participants, beneficence, and justice (U.S. Department of Health and Human Services, 2014). One application of respect for the participants is the selection of participants and informed consent, which I discuss under Participants and Ethical Research. Beneficence involves maximizing the benefits of the study while minimizing harm to participants (U.S. Department of Health and Human Services, 2014). The informed consent form delineated the risks and benefits of the study. Justice involves certain classes of society bearing the

burden of research while others receive the benefit (U.S. Department of Health and Human Services, 2014). The burden borne by participants of the study was minimal and may benefit small businesses in the Midwest United States.

### **Participants**

To be eligible for the study, participants needed to be leaders of small businesses in the Midwest United States as defined by the U.S. Census Bureau (2017), which are businesses with fewer than 500 employees. As of 2014, there were 1,080,976 small businesses in the Midwest United States, which constituted 97.3% of all firms in the region (U.S. Census Bureau, 2017). Participants in the study were small business leaders who are members of SurveyMonkey's Contribute Panel. Members of SurveyMonkey's Contribute Panel volunteer to participate without compensation in crowdsourcing surveys, and fit the demographic and other criteria established by researchers (Roulin, 2015; SurveyMonkey, 2017). Participants in crowdsourcing pools such as SurveyMonkey's Contribute Panel provide a convenient source of contacts for a sample that is representative of an online population (Hayes, 2015; Landers & Behrend, 2015; Roulin, 2015; SurveyMonkey, 2017).

### **Research Method and Design**

This study involved the testing of hypotheses about to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance of small businesses. The method for the study was quantitative, and the design used in this study was the quantitative correlational design. A discussion of the research method and design for this study follows.



## Research Method

The quantitative method allows researchers to examine the relationship between variables (Inabinett & Ballaro, 2014; Oldacre, 2016; Yilmaz, 2013). Quantitative studies are a common approach to study management accounting topics (Harris & Durden, 2012). Previous researchers used the quantitative method to conduct similar research on budgets and small businesses (Enqvist et al., 2014; Harris & Durden, 2012; Libby & Lindsay, 2010; Umapathy, 1987). The quantitative method is appropriate for a positivist approach to accounting research (Luft & Shields, 2014; Shields, 2015; Zahirul, Mark, & Tharusha, 2013). Positivist researchers test hypotheses based on theories using experimental, archival, or survey data (Luft & Shields, 2014). This study involved the testing of hypotheses about to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance of small businesses based on survey data. Therefore, the quantitative method was appropriate for the study.

Researchers use qualitative studies to answer questions of *how* and *why* (Bansal & Corley, 2012), but the qualitative method is not suitable for the examination of relationships among variables (Rogers, 2016; Venkatesh, Brown, & Bala, 2013; Yilmaz, 2013). Therefore, a qualitative study was not appropriate for the study. Mixed-methods studies are useful when a quantitative or a qualitative study alone is not sufficient to address the research problem (Leider et al., 2014; Venkatesh et al., 2013; Zahirul et al., 2013). The study involved testing hypotheses based on established theories. Because there was no need to examine the problem qualitatively, a mixed-methods study was not appropriate.

## **Research Design**

I used the quantitative correlational design in this study. The quantitative correlational design is appropriate when testing noncausal relationships among variables (Cohen, Cohen, West, & Aiken, 2003; Inabinett & Ballaro, 2014; Su et al., 2015; Yilmaz, 2013). My study involved examining to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. Therefore, the correlational design was appropriate for examining the relationships among these variables. Although small business leaders' use of budgeting may directly affect a business's financial performance, only a true experiment could confirm such a direct relationship (Arnold & Artz, 2015; De Baerdemaeker & Bruggeman, 2015; Hölzl, 2014). Neither an experimental nor a quasi-experimental design was appropriate because manipulating the independent or predictor variables (budget planning, budget control, and the age of the business) was not feasible within the constraints of daily businesses operations (see Brinckmann & Kim, 2015; Luft & Shields, 2014; Rogers, 2016).

## **Population and Sampling**

The general population for this study was Midwestern small business leaders as defined by the U.S. Census Bureau (2017) and U.S. Small Business Administration (2016). The specific geographical area of the population for this study was the Midwest United States. The population was appropriate for answering the overarching research question of to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. Small business

leaders (owners or senior managers) are generally the most knowledgeable about their organizations' budget processes and financial performance (Churchill & Lewis, 1983; Haron et al., 2014).

Sampling is a technique that allows for generalizing the results of a study to a wider population when a census is not feasible (Uprichard, 2013). A key distinction between probability and nonprobability sampling is the likelihood that every object in a population has an equal chance for selection (Uprichard, 2013). Probability sampling is superior for making statistical inferences to the population and minimizing selection bias (Uprichard, 2013). However, nonprobability sampling is advantageous when there is limited time or resources, objects of the target population are difficult to access or widely dispersed, or there is a need for quick decision (Gellynck, Cárdenas, Pieniak, & Verbeke, 2015; Oldacre, 2016; Uprichard, 2013), all of which may exist in the context of business research. Therefore, I used a nonprobability sampling method due to limited time to complete the study and the potential difficulty of reaching some participants such as leaders of very small businesses and those in remote locations of the region.

The nonprobability sampling method used for this study was convenience, or availability, sampling. With convenience sampling, selecting objects from the target population depends on participants' self-selection, availability, or the convenience to the researcher (Lipi, 2013). The participants in my study were both available and convenient in that they were easily accessible business leaders who participated in SurveyMonkey's crowdsourcing service. The participants in my study self-selected because they voluntarily chose to participate by responding to the invitation to take part in the study.

Landers and Behrend (2015) indicated that convenience sampling is a common form of nonprobability sampling used in research, although the method does have weaknesses such as limited reliability and potential misrepresentation of the population. Other accounting and business researchers used convenience samples in their studies (e.g., Bourmistrov & Kaarbøe, 2013; Hammoud & Nash, 2014; Kruis et al., 2016; Silverman, 2014). Other forms of nonprobability sampling, such as purposive, quota, and respondent-assisted sampling, were not appropriate. Purposive and quota sampling involve sampling based on predetermined characteristics, while respondent-assisted sampling is useful with populations that are difficult to reach (Hyysalo et al., 2015), none of which applied to my study.

An a priori power analysis is a method researchers use to determine a sample size of sufficient power to reject the null hypothesis and detect an effect when using multiple regression (Faul, Erdfelder, Buchner, & Lang, 2009; Kristensen & Israelsen, 2014; MacKinnon, Cox, & Baraldi, 2012). Therefore, I used an a priori power analysis to determine a sufficient sample size. A power analysis using the G\*Power statistical software package indicated a minimum sample size of 77 assuming a medium effect size ( $f^2 = .15$ ) with  $\alpha = .05$  to achieve a power of .80. The basis for the effect size was an analysis of 33 articles in which financial performance, as measured by sales or profit growth, was the outcome measurement. Increasing the power to .99 requires a sample size of 161; therefore, a sample size of between 77 and 161 participants was appropriate for the study (Figure 1).

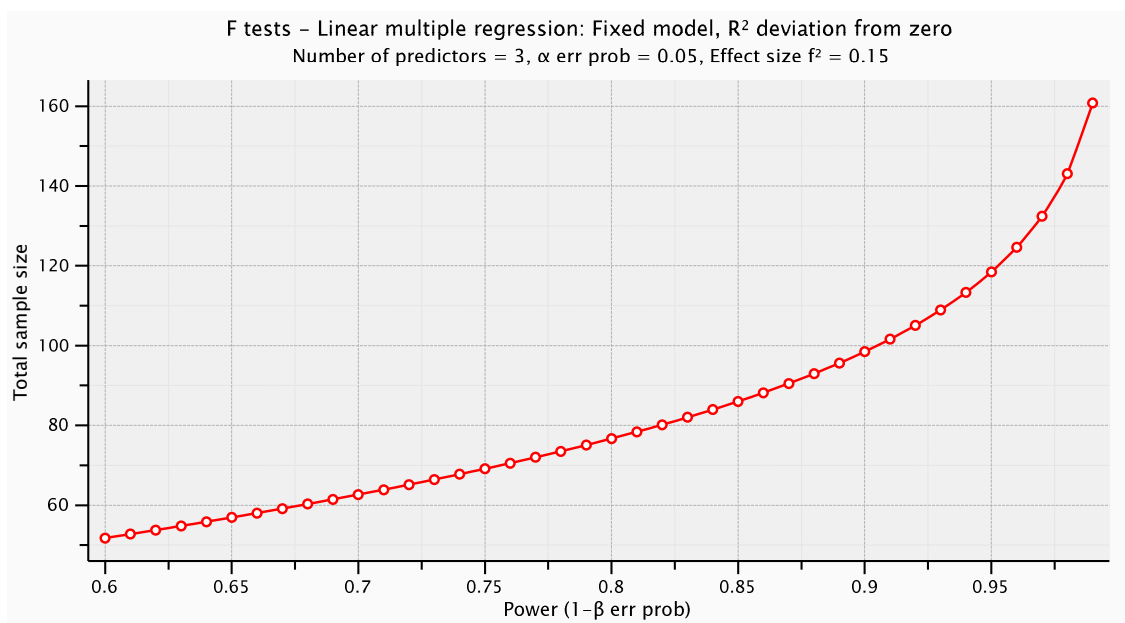


Figure 1. Power as a function of sample size.

### Ethical Research

Conducting research ethically is important to meet research requirements, maintain the credibility of the research process, and protect participants (U.S. Department of Health and Human Services, 2014). My responsibility as the researcher involved adhering to principles of the Belmont Report. To comply with these requirements, my training by the National Institutes of Health (certification number 1610520) included the protection of human research participants. I also complied with the requirements of the Walden University Institutional Review Board (IRB) (approval number 10-21-16-0493650).

The principles of the Belmont Report include informing participants of their rights and preserving their confidentiality (U.S. Department of Health and Human Services, 2014). I provided an informed consent form to every participant as part of the

online survey instructions that delineated (a) the background and purpose of the study, (b), the procedures for completing and submitting the survey, (c) the voluntary nature of the survey, and (d) how to withdraw from the survey. Participants also received statements about confidentiality, the risks and benefits of participating in the study, and that there was no compensation for completing the study. Another section of the form provided contact information for the researcher and Walden University.

In many research situations, a researcher must not only provide research participants with an informed consent form but also obtain written consent (U.S. Department of Health and Human Services, 2014). When conducting survey research, researchers can often use implied consent, which allows for anonymity in participation (Drysdale, Frost, & McBeath, 2015; Inabinett & Ballaro, 2014; Rogers, 2016). Implied consent means that participants do not sign the consent form (the removal of the signature lines); rather, the consent form contains an explanation that in order to protect participant privacy, the researcher will not request signatures, and completing the survey will indicate participant consent (Drysdale et al., 2015). I used implied consent, which means participants indicated their consent by completing and submitting the online survey. The online survey contained an option for participants to save a copy of the consent form. The use of implied consent and not including any personally identifiable information in the online survey helped to maintain the anonymity of participants. Securing all collected data in a safe place for a minimum of 5 years also ensured anonymity.

### **Data Collection Instruments**

No one instrument existed to gather data on all the variables for my study.

Therefore, my study involved the development of a survey instrument using existing measures for each variable. The purpose of the survey instrument was to collect data on each variable of my study, as well as demographic information on each small business represented in the survey. The survey took no more than 10 minutes to complete.

Appendix A contains the items in the online survey instrument. I will retain the collected raw data for a minimum of 5 years, which will be available upon request. Table 2 comprises a summary of the variables in the survey, listed in the order they appeared in the survey instrument, followed by a discussion of each item.

Table 2

*Variable Measurement*

Variable	Survey item #	Level of measurement
Budget planning (predictor variable)	1	Ratio
Budget control (predictor variable)	2	Ordinal
Financial performance (criterion variable)	3	Ordinal
Business age (predictor variable)	4	Ratio
Industry (demographic variable)	5	Nominal
Number of employees (demographic variable)	6	Ratio
Job position (demographic variable)	7	Nominal

## **Budget Planning**

Though initially measured at the nominal level, I transformed the budget planning predictor variable to a ratio level measurement representing the complexity of small businesses' use of budgets for planning purposes. As businesses progress through growth stages, they become more complex, as do their budget processes (Churchill & Lewis, 1983). The earliest and most basic form of budgeting used by organizations is the cash budget, which projects cash inflows, outflows, and cash needs (Karadag, 2015; Mazzarol, 2014; Umapathy, 1987). Business leaders adopt cash budgets first because of their relative simplicity and the importance of cash management for survival (Churchill & Lewis, 1983).

As organizations mature, business leaders implement operating budgets, which project revenues and expenditures, typically for the next year, and incorporate sales forecasts and production schedules (Churchill & Lewis, 1983; Samuelsson et al., 2016). As a business continues to mature, leaders use capital budgets to plan capital expenditures of major assets such as buildings and equipment for multiple years (Jindrichovska, 2013; Samuelsson et al., 2016; Sengul & Gimeno, 2013). Leaders also begin to implement strategic budgets, which project resources for several years based on strategic plans (Churchill & Lewis, 1983; Samuelsson et al., 2016; Sponem & Lambert, 2016).

Researchers have measured the use of cash, operating, capital, and strategic budgets in their research (e.g., Haron et al., 2014; Kroes & Manikas, 2014; Samuelsson et al., 2016; Umapathy, 1987). Therefore, the survey instrument contained an item to



measure the use of each type of budget, consistent with studies such as Umapathy's (1987). Each responding leader indicated the types of budgets used in their small business. Based on participant answers, I transformed responses to reflect the final budget planning variable as the number of budgets used. A larger number of budgets indicated more complexity and maturity.

### **Budget Control**

The budget control predictor variable was an ordinal measure of the complexity of small business leaders' use of budgets for control purposes. As businesses advance through growth stages they become more complex, as do their budget processes (Churchill & Lewis, 1983). Based on a review of the literature on the control function of budgets, I measured budget control by the frequency of budget reviews similar to studies by Kung et al. (2013) and Umapathy (1987). Consistent with Churchill and Lewis's (1983) theory, greater use of these tools indicates more advanced stages of organizational growth. The survey item prompted leaders to indicate the frequency that their organizations compare and analyze variances of actual to planned revenues and expenses, where a 1 indicates *seldom or never* (no budget reviews) to a 6 for *weekly/daily* (very frequent) budget reviews. A larger number of budget reviews indicated greater budget control.

### **Business Age**

The last predictor variable in my study, business age, was a ratio measurement. As indicated in the literature review, researchers commonly use the age of firms in studies. Theories and study findings indicate a relationship between the stage of the

firm's growth and the firm's age. I used the age of the firm as a predictor variable, consistent with the theory of Churchill and Lewis (1983) and studies by Moores and Yuen (2001) and Bedford and Malmi (2015). Moores and Yuen used age and size as indicators of life cycle stages. Leaders provided their firms' age using a survey question asking participants to indicate the year their business began to determine the number of years their business has been in existence, consistent with measurements used by the U.S. Census Bureau (2017) and Moores and Yuen.

### **Financial Performance**

The criterion variable in this study was financial performance, an ordinal measurement of sales and profit growth. As discussed in the literature review section, business leaders' subjective assessment of sales and profit growth is a common measure of financial performance in studies of small businesses (e.g., Elhamma, 2015; Halabí & Lussier, 2014; Kung et al., 2013; Lipi, 2013; Rahman et al., 2015; Umapathy, 1987). Therefore, consistent with Umapathy (1987) and others, I used a Likert-type survey item asking leaders to assess the financial performance of their small business as determined by relative sales and profit growth over the past 3 years as compared with their competitors, where a 1 indicates *a low performer* and a 5 indicates *a high performer*. A larger number indicated higher financial performance.

### **Demographic Variables**

Demographic variables included the size and industry classification of the business and the position of the participant. The primary purpose for collecting data on these variables was for data analysis and validity (discussed in more detail later) and to

determine whether the sample was representative of the population. The size of a business is a common variable researchers measure, especially in studies of small businesses. Researchers use business size as a demographic, independent, dependent, or control variable (e.g., Baños-Caballero et al., 2014; Lechner & Gudmundsson, 2014; Moores & Yuen, 2001; Umapathy, 1987; Verbeke & Yuan, 2013). Two primary measures for business size in research are sales volume, as measured in dollars, and the number of employees. However, using financial measures to measure size presents problems because of differing accounting issues affecting sales and profits; therefore, researchers of contingency-based studies often use the number of employees (Chenhall, 2003). The number of employees is also the measure the U.S. Census Bureau (2017) uses in their Business Dynamic Statistics. Using the number of employees also allows for verification that responses are from small business as previously defined. Consistent with other studies, the survey contained a question asking leaders to indicate the number of employees in their business.

Industry classification is another common demographic used in research. Researchers use the type of industry as a demographic, independent, dependent, or control variable (e.g., Bamiatzi & Kirchmaier, 2014; Elhamma, 2015; Messner, 2016; Weber, Geneste, & Connell, 2015). A common method used by researchers to measure industry classification is the North American Industry Classification System (U.S. Census Bureau, 2017). Consistent with other researchers, the survey in this study contained an item for leaders to indicate the industry classification of their business using nine broad

industry sectors used in the U.S. Census Bureau Business Dynamics Statistics (U.S. Census Bureau, 2017).

### **Instrument Reliability and Validity**

The study involved measuring each variable using one item based on how researchers have measured the variables in previous studies. The variables were not mental constructs and therefore using an existing psychometric instrument to measure each variable was not appropriate. According to Cronbach and Meehl (1955), an attribute not operationally defined requires validation of the construct. In addition, psychometric testing and evaluation only apply where unobservable constructs exist (Michell, 2013; Slaney & Racine, 2013). Because the study variables were not mental constructs and did not require operationalized definitions, tests for construct validity did not apply. Because there was no existing survey instrument available for my study, no published reliability and validity information was available. Therefore, I conducted a field test and a pilot study to assess content validity and reliability of the instrument using methods as described under Data Collection.

### **Data Collection Technique**

I used an online survey to collect data. Researchers commonly use self-completed surveys as a quantitative method of data collection using closed-ended questions (Díaz de Rada & Domínguez-Álvarez, 2014; Samuelsson et al., 2016; Umapathy, 1987).

Advantages of self-completed online surveys include uniformity of data, low cost, anonymity, speed, and reduced data processing errors due to direct data entry by respondents (Casler, Bickel, & Hackett, 2013; Díaz de Rada & Domínguez-Álvarez,

2014; Rowley, 2014). Disadvantages of the survey method of data collection include potential low response rates, the inability for respondents to clarify the meaning of questions, and a greater risk of incomplete data (Casler et al., 2013; Rowley, 2014).

Following IRB approval but before distributing the survey to the participants, I conducted a field test and a pilot study to assess validity and reliability of the instrument. A field test enables researchers to assess the survey instrument for content validity (Calzone et al., 2016; Gajewski, Price, Coffland, Boyle, & Bott, 2013; Shih & Chuang, 2013). The field test in this study involved five subject matter experts in the areas of academics and business practice who reviewed the study's purpose statement, overarching research question, a summary of each variable, and the survey instrument. Following the guidelines Radhakrishna (2007) suggested for assessing questionnaire validity, the field test involved gathering information to answer three questions:

1. Does the instrument look like a survey?
2. Is the survey appropriate for the study population?
3. Does the survey include all of the questions needed to answer the study research question and achieve the study objectives?

Regarding the first question, the subject matter experts agreed the survey looks like a survey ( $M = 4.6$ ,  $SD = .548$ ,  $N = 5$ , where 1 = *strongly disagree* and 5 = *strongly agree*). On the second question, the respondents agreed the survey was appropriate for the study population ( $M = 4.2$ ,  $SD = .837$ ,  $N = 5$ ). For the third question, the subject matter experts agreed the survey included all the questions to answer the research question ( $M = 4.5$ ,  $SD = .577$ ,  $N = 4$ ). I also asked the subject matter experts to evaluate

each survey question and indicate their agreement that the question measures the variable, where 1 is *very unlikely* and 6 is *very likely*. The subject matter experts agreed the survey questions would measure the variables as presented in Table 3.

Table 3

*Survey Questions' Ability to Measure Variables*

Variable	<i>M</i>	<i>SD</i>
Budget planning	5.20	.447
Budget control	5.20	1.304
Business age	6.00	.000
Financial performance <sup>a</sup>	5.50	.577
Industry	5.60	.548
Size of business (number of employees)	4.80	1.643
Respondent's job position	5.20	1.303

*Note.* *N* = 5 except as noted. Response options ranged from 1 (*very unlikely*) to 6 (*very likely*).

<sup>a</sup>*N* = 4 (one subject matter expert did not respond).

The subject matter experts also provided qualitative feedback on the survey questions, which I used to improve the survey questions. For example, for business age, the original survey question prompted respondents to indicate the number of years the business has been in existence, which could result in errors, so the question now requires business leaders to indicate the year the business began. There is now an "Other" category for the business industry. Finally, I reworded the response options in the question asking for the business leader's position to add clarity.

The field test also involved a test for the readability of the survey instrument. Radhakrishna (2007), Samel (2014), and Timmins (2015) describe methods for checking readability that include the Flesch Reading Ease and Flesch-Kincaid Grade Level tests. The results of these tests for the consent form and survey instrument were 45.1 on the Flesch Reading Ease test and 10.3 on the Flesch-Kincaid Grade Level test, indicating the survey was readable. Based on results from the readability tests, no other modifications of the survey instrument were necessary before conducting the pilot test to assess instrument reliability.

Researchers use the test-retest procedure to measure the reliability of a survey instrument (Calzone et al., 2016; Plaete et al., 2016; Reeve et al., 2013). To gather evidence of reliability, I administered the survey to a small convenience sample of local business leaders from the population using the test-retest procedure with a 5-day test-retest interval. If the interval is too long, there is more opportunity for the factors to change (Plaete et al., 2016), which can result in changes to the business leaders' scores.

The results of the test-retest procedure contained evidence of the survey instrument's reliability. Researchers use the Pearson's correlation coefficient and Spearman's Rho to measure instrument reliability (Eisinga, Grotenhuis, & Pelzer, 2013; Lianying & Zhen, 2014; Rahman et al., 2015). I calculated the reliability of Questions 1-4—the questions measuring each of the study variables—using the Pearson's correlation coefficient. The Pearson's correlation coefficient was at least .80 for each variable, indicating the instrument is reliable. Table 4 contains the results of the test-retest procedure for each of the study variables.

Table 4

*Test-Retest Results for Study Variables*

Variable	Pearson's correlation
Budget planning	.855
Budget control	.889
Business age	1.00
Financial performance	1.00

*Note.*  $N = 8$ .

Upon satisfactory completion of the pilot study, I published my survey instrument using the online survey service SurveyMonkey. SurveyMonkey is preferable due to its popularity, ease of use, low cost, and features (Nunnemacher, 2016; Rowley, 2014; Timmins, 2015). The online survey consisted of an introduction page with a statement of consent and purpose of the study. The subsequent pages of the survey contained the survey items as described in the previous section. Using an Internet-based method with data verification features for data collection can reduce errors caused by data collection and transcription (Rowley, 2014; Timmins, 2015). Therefore, each question included the feature to require a response, which mitigated the risk of incomplete data. Survey items included features such as limiting the number of options, where appropriate, and requiring whole integers for the age of the business and number of employees to reduce data collection error. Other data verification features in the online survey instrument consisted of allowing only one survey from the same device using masked Internet Protocol addresses for anonymity. The final page of the survey contained a statement of



appreciation for participating in the survey and information on how participants can receive the results of the study.

After the creation of the survey, I used crowdsourcing using SurveyMonkey Audience to recruit participants. Crowdsourcing is an increasingly popular method of accessing research participants that is equal to or superior to more traditional convenience sampling in terms of a data quality and representation of the general population (Hayes, 2015; Landers & Behrend, 2015; Roulin, 2015). SurveyMonkey distributed the survey to volunteers who met the criteria of small or medium business owners or managers in the Midwest United States. A feature in SurveyMonkey allows researchers to export data directly from the survey into data analysis software, further reducing the likelihood of data entry errors.

### **Data Analysis**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The predictor variables were budget planning, budget control, and the age of the business. The criterion variable was the financial performance of the business. The study research question was to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The null and alternative hypotheses are below.

- Null hypothesis ( $H_0$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses does not significantly predict financial performance.

- Alternative hypothesis ( $H_a$ ): The linear combination of budget planning, budget control, and the age of the business in small businesses significantly predicts financial performance.

### **Statistical Analysis**

The statistical data analysis I used in the study was a multiple regression. Multiple regression is the appropriate method of quantitative data analysis when there are one interval dependent variable and more than one interval or categorical independent variable (Cohen et al., 2003; Kerlinger & Pedhazur, 1973; Seng, 2016). The criterion variable in this study was financial performance, which had an ordinal level of measure. The predictor variables in the study were budget planning, budget control, and the age of the business, which all had ordinal or interval measurement levels. Multiple regression is a common method of quantitative data analysis used in research of managerial accounting and small businesses (e.g., Arnold & Artz, 2015; Bedford, 2015; Mazzarol, 2014; Rahman et al., 2015; Rogers, 2016; Schofield, 2015; Verbeke & Yuan, 2013). Therefore, multiple regression was the appropriate data analysis method for the study.

Other types of analysis used in quantitative studies that were not appropriate for the study include bivariate linear regression, discriminant analysis, and analysis of variance (ANOVA). Researchers use bivariate linear regression when the study has one predictor and one criterion variable (Cohen et al., 2003; Halabí & Lussier, 2014; Kerlinger & Pedhazur, 1973). With bivariate linear regression, the researcher seeks to determine the ability of the predictor variable to predict the criterion variable. Because this study involved more than one predictor variable, the bivariate linear regression was

not appropriate. Discriminant analysis involves the prediction of group membership for a criterion variable based on one or more interval or categorical predictor variables (Bedford & Malmi, 2015; Cohen et al., 2003; Seng, 2016). With discriminant analysis, the criterion variable is categorical in nature. Because the criterion variable in this study was not categorical, discriminant analysis was not appropriate. An ANOVA is appropriate when the criterion variable is quantitative and continuous, but predictor variables are categorical (Bedford, 2015; Nunnemacher, 2016; Weber et al., 2015). With ANOVA, researchers seek to determine differences in means between groups. Because the predictor variables in this study were not categorical and I was not examining the possibility of mean differences, ANOVA was not an appropriate method of data analysis.

### **Assumptions**

Researchers base multiple regression analysis on certain assumptions. Osborne and Waters (2002) proposed four assumptions researchers should always test when using multiple regression analysis: normal distribution of variables, linear relationship between dependent and independent variables, the measurement error of variables, and homoscedasticity. Multicollinearity is another important assumption involving the lack of collinearity among predictor variables (Cohen et al., 2003; Kerlinger & Pedhazur, 1973; Kristensen & Israelsen, 2014). Next is a discussion of each assumption, the test required for each assumption, and implications of a failed test.

**Normal distribution.** For a multiple regression analysis to be valid, one assumption is that the variables have normal distributions. To test this assumption, researchers use tests to check for the normal distribution of variables (Eisinga et al.,

2013; Kristensen & Israelsen, 2014; Osborne & Waters, 2002). Therefore, I created and visually inspected a histogram of each variable for normal distribution and conducted a Kolmogorov-Smirnov test to check for normal distribution of each variable. In the event of outliers or non-normal distributions, researchers can use bootstrapping (Mooney & Duval, 1993), discussed later under Violations of Assumptions.

**Linear relationship.** Another assumption for multiple regression analysis to be valid is that there is a linear relationship between variables. To test the linearity assumption, researchers can create and analyze scatterplots of variables and standardized residual values (Kristensen & Israelsen, 2014; Oldacre, 2016; Osborne & Waters, 2002). Therefore, I created and visually inspected a bivariate scatter plot and a plot of standardized predicted and residual values for each combination of variables. If linear relationships do not exist, researchers can perform bootstrapping procedures, discussed later under Violations of Assumptions.

**Measurement error.** Valid multiple regression analysis also involves the assumption of no error in the measure of variables. Cronbach's alpha is a common test for measurement error (Osborne & Waters, 2002), but only applies to measures with multiple items (Bedford & Malmi, 2015). Because the survey instrument used in this study contained only single items of measurement, I did not employ a test for measurement error.

**Homoscedasticity.** Homoscedasticity is the assumption that the variance of errors is similar at all levels of an independent variable. A visual examination of plot residuals is normally sufficient to test for homoscedasticity (Kristensen & Israelsen, 2014; Osborne

& Waters, 2002; Rogers, 2016). According to Osborne and Waters (2002), a slight level of heteroscedasticity has a minimal effect on significance tests, but larger levels can lead to a Type I error. Therefore, I created and visually examined plots of residuals to test for homoscedasticity.

**Multicollinearity.** Multicollinearity exists when two or more predictor variables linearly correlate, indicating the lack of independence between variables (Cohen et al., 2003; Kerlinger & Pedhazur, 1973; Kristensen & Israelsen, 2014). The most common test for multicollinearity is a check for a high  $R^2$  value, normally .80, in a matrix of bivariate correlations (Gellynck et al., 2015; Salama & Putnam, 2013; Vatcheva, 2015). I prepared and examined a matrix of bivariate correlations to check for  $R^2$  values greater than .80.

**Violation of assumptions.** Violating assumptions can result in errors. Two types of errors can occur when inferring statistical significance of the analysis. A Type I error results when researchers reject the true null hypothesis, and a Type II error results when researchers do not reject a false null hypothesis (Button et al., 2013). Decreasing the  $p$  value, from .05 to .01, for example, reduces the possibility of a Type I error, but also increases the likelihood of a Type II error (Button et al., 2013). The convention in social and business research is to use  $p < .05$  as an acceptable level of statistical significance (Brutus et al., 2013; Lechner & Gudmundsson, 2014; Luft & Shields, 2014). Therefore, I used  $p < .05$  in my analysis.

If the violation of an assumption exists, researchers may use a nonparametric procedure to analyze the data, such as discriminate analysis (Bhandari & Iyer, 2013; Cohen et al., 2003; Uwonda et al., 2013). Discriminant analysis is the appropriate test in

studies with one or more independent variables and one dependent variable that is categorical. However, Mooney and Duval (1993) suggested the use of bootstrapping if there is a violation of assumptions. With bootstrapping, the sample becomes the entire population for statistical analyses (Mooney & Duval, 1993). Therefore, I used the bootstrapping procedure to mitigate any violations of assumptions.

### **Interpreting Results**

Researchers use descriptive statistics to interpret the inferential results of the regression analysis (de Jong & van Houten, 2014; Lianying & Zhen, 2014; Verbeke & Yuan, 2013). Therefore, the results of the study included descriptive statistics of central tendency and variability of variables. I used a pre-established probability standard of .05 for the alpha, or  $p$  value, which is common in social and business research (see Bedford & Malmi, 2015; Brutus et al., 2013; Luft & Shields, 2014). The related confidence interval for an alpha of .05 is 95%. A medium effect size ( $f^2 = .15$ ) was appropriate based on a review of 33 articles where financial performance, as measured by sales or profit growth, was the outcome measurement (Brinckmann, Grichnik, & Kapsa, 2010).

### **Software and Data**

Common software researchers use to analyze statistical data include Statistical Package for the Social Sciences (SPSS), Statistical Analysis System (SAS), and Stata (MacKinnon et al., 2012). Business researchers often use SPSS (e.g., Abdallah & Alnamri, 2015; Kroes & Manikas, 2014; MacKinnon et al., 2012; Rahman et al., 2015; Rogers, 2016). Therefore, I used SPSS v23.0 to analyze data for this study.

After data collection but before data analysis, researchers visually inspect the survey data for missing, incomplete, or unusual information (Osborne, 2013; Osborne & Waters, 2002; Rogers, 2016). Missing data occurs when respondents fail to answer a question. Using online surveys can reduce errors resulting from missing or incomplete data by requiring respondents to provide responses before they can submit the survey and by using data validation features (Rowley, 2014; Timmins, 2015). I used an online survey tool (SurveyMonkey) that requires a response to each question and includes data validation such as limiting the number of options and requiring whole integers where appropriate.

In the event of missing or erroneous data, researchers may employ data cleaning. Data cleaning is important in statistical analyses, including regression analysis (Karanja, Zaveri, & Ahmed, 2013; Osborne, 2013; Seaman & White, 2013). Osborne (2013) discussed four common methods to address missing data, the most popular being listwise deletion, which is the deletion of any cases with missing data. Because the likelihood of missing data was minimal, I adopted this procedure for any missing data.

### **Study Validity**

Study validity was the final consideration of the project. Validity is an important aspect of a study, which involves the integrity of conclusions drawn from the research (Yilmaz, 2013). Two types of validity are internal validity and external validity.

#### **Internal Validity**

Internal validity relates primarily to causality, which is the ability to infer causal relationships from the results of the study (Luft & Shields, 2014). Because this was a

correlational study, and therefore nonexperimental, there were no threats to internal validity. However, statistical conclusion validity, discussed next, was a potential concern.

**Statistical conclusion validity.** Violations of statistical conclusion validity can result in two types of errors when inferring statistical significance of the analysis. A Type I error results when researchers incorrectly reject the true null hypothesis, and a Type II error results when researchers do not reject a false null hypothesis (Button et al., 2013). Three areas of statistical conclusion validity are instrument reliability, data assumptions, and the sample size, discussed next.

**Reliability of the instrument.** Instrument reliability relates to the internal consistency of the measurement instrument used in the study. As discussed earlier under Instrument Reliability, the instrument used in this study consisted of only single item measures. Researchers often use Cronbach's alpha to compare the coefficient of the sample to that of the instrument (Osborne & Waters, 2002). However, Cronbach's alpha is relevant when there are multiple items within a scale (Bedford & Malmi, 2015; Cronbach & Meehl, 1955; Eisinga et al., 2013). The survey instrument used in this study contained only single items; therefore, a reliability test of the instrument was not appropriate.

**Data assumptions.** The Data Analysis section included a discussion of five data assumptions and related tests for a multiple regression analysis. The five assumptions are the normal distribution of variables, a linear relationship between the dependent and independent variables, homoscedasticity, a lack of collinearity among the independent variables, and measurement error. A violation of assumptions can result in errors,



resulting in the use of a nonparametric procedure such as discriminant analysis to analyze the data (Bhandari & Iyer, 2013; Cohen et al., 2003; Uwonda et al., 2013). Researchers may also use bootstrapping procedures to address violations of assumptions (Mooney & Duval, 1993). As previously indicated, I used bootstrapping to address any violations of assumptions.

**Sample size.** Sample size is an important factor affecting the validity of the study. To reject the null hypothesis and detect an effect when using multiple regression, research requires a sample size of sufficient power (Faul et al., 2009; Kristensen & Israelsen, 2014; MacKinnon et al., 2012). An insufficient sample size for the type of analysis and number of variables may result in an incorrect inference about results of the study. An a priori power analysis indicated a minimum sample size of 77 assuming a medium effect size ( $f^2 = .15$ ) with  $\alpha = .05$  to achieve a power of .80, whereas a power of .99 requires a sample size of 161. Therefore, a sample size of between 77 and 161 participants was appropriate for the study.

### **External Validity**

External validity involves generalizing the results of a study to a population. The main factor that influences external validity is the type of sampling strategy (Uprichard, 2013). Probability sampling assumes that every object in a population has an equal chance for selection and is preferred for making statistical inferences to the population (Uprichard, 2013). Nonprobability sampling can threaten external validity, but is useful when certain conditions exist in the context of business research (Gellynck et al., 2015; Hammoud & Nash, 2014; Mitchelmore & Rowley, 2013), such as limited time or

resources, limited accessibility of participants, or the need for a quick decision (Landers & Behrend, 2015; Oldacre, 2016; Uprichard, 2013). However, nonprobability sampling limits the ability to generalize the results of the study to other populations.

### **Transition and Summary**

Section 2 began with a description of the project, including the role of the researcher and the participants in the study, who were small business leaders in the Midwest United States. The research method and design was a quantitative correlational study using an online survey to collect data through convenience sampling. Section 2 ended with a discussion of the data analysis process using multiple linear regression and the methods I used to test the study's validity.

I begin Section 3 with a presentation of the findings of the study. Next is a discussion of the application of the study to professional practice and implications for social change. I then provide recommendations for action and further research and offer personal reflections on the study.

### Section 3: Application to Professional Practice and Implications for Change

This section begins with a presentation of the findings including descriptive statistics, tests for assumptions, and inferential results of the data analysis. Next is the application of the study results to professional practice and implications for social change. I conclude Section 3 with recommendations for action based on the study and provide personal reflections of the study.

#### **Overview of Study**

The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. The predictor variables were budget planning, budget control, and the age of the business. The criterion variable was the financial performance of the business.

I used standard multiple linear regression to examine the ability of budget planning, budget control, and the age of the business to predict the value of financial performance. Tests of assumptions indicated no serious violations. The model as a whole was able to significantly predict financial performance,  $F(3, 73) = 4.522, p < .006, R^2 = .122$ . Budget planning significantly predicted financial performance; however, budget control and business age did not explain a significant variation in financial performance.

#### **Presentation of the Findings**

This section begins with a presentation of descriptive statistics and a description of tests for assumptions. A discussion of the results of inferential statistics is next, followed by the application of the findings to the theoretical framework and a summary. I

employed bootstrapping with 2,000 samples to mitigate the potential effect of any violation of assumptions; therefore, presentations include bootstrapping 95% confidence intervals where applicable.

### **Descriptive Statistics**

I received a total of 86 survey responses. Three records were incomplete and six records did not meet the criterion of a small business, which resulted in 77 records for the analysis. Of the 77 responses, 23 (29.9%) respondents indicated they did not use a formal written budget in their business, while 54 (70.1%) indicated using some type of formal written budget. Tables 5 and 6 contain descriptive statistics of the study variables. Table 7 displays the demographics of the survey respondents.

Table 5

#### *Means and Standardized Deviations for Quantitative Study Variables*

Variable	<i>M</i>	<i>SD</i>	Bootstrapped 95% CI ( <i>M</i> )
Budget planning	1.21	1.09	[.96, 1.44]
Budget control	2.10	.79	[1.92, 2.27]
Business age	24.87	20.10	[20.87, 29.42]
Financial performance	.42	.86	[.22, .60]

*Note.*  $N = 77$ .

Table 6

*Frequencies for Quantitative Study Variables*

Variable (survey response)	Frequency	Percent
Budget planning <sup>a</sup>		
Cash budget	32	41.6
Operating budget	33	42.9
Capital budget	15	19.5
Strategic budget	13	16.9
Budget control		
Never (0)	0	0.0
Annually or semiannually (1)	20	26.0
Quarterly (2)	29	37.6
Monthly (3)	28	36.4
Daily/weekly (4)	<u>0</u>	<u>0.0</u>
Total	77	100.0
Age		
1-5	8	10.3
6-10	10	13.0
11-15	12	15.6
16-20	9	11.7
21-25	8	10.4
26+	<u>30</u>	<u>39.0</u>
Total	77	100.0
Financial performance		
Low performer (-2)	0	0.0
Somewhat low performer (-1)	11	14.3
Average performer (0)	31	40.3
Somewhat high performer (1)	27	35.1
High performer (2)	<u>8</u>	<u>10.3</u>
Total	77	100.0

*Note.*  $N = 77$ . Budget planning reflects the types of budgets used in the business. Budget control is the frequency of the comparison and analysis of variances of actual to planned or budgeted revenues and expenses. Age is the number of years the firm has existed, grouped according to the U.S. Census Bureau's Business Dynamic Statistics method. The actual number of years was used in the data analysis. Financial performance is the respondent's assessment of the overall performance of the business in terms of sales and net profits relative to competitors over the last 3 years.

<sup>a</sup>More than one selection was possible.

Table 7

*Demographics of Study Respondents*

Variable	Frequency	Percent
<b>Business size (number of employees)</b>		
1 to 4	32	41.5
5 to 9	11	14.3
10 to 19	7	9.1
20 to 49	5	6.5
50 to 99	5	6.5
100 to 249	9	11.7
250 to 499	<u>8</u>	<u>10.4</u>
Total	77	100.0
<b>Industry classification of business</b>		
Agriculture, Forestry, and Fishing	1	1.3
Mining	1	1.3
Construction	7	9.1
Manufacturing	3	3.9
Transportation, Communication, and Public Utilities	2	2.6
Wholesale Trade	2	2.6
Retail Trade	9	11.7
Finance, Insurance, and Real Estate	8	10.4
Services	39	50.6
Other	<u>5</u>	<u>6.5</u>
Total	77	100.0
<b>Respondent's position within the business</b>		
Owner and manager	46	59.7
Owner but do not manage	7	9.1
Manager but not owner	23	29.9
Other / no response	<u>1</u>	<u>1.3</u>
Total	77	100.0

*Note.*  $N = 77$ .

## **Tests of Assumptions**

Researchers base multiple regression analysis on certain assumptions. Osborne and Waters (2002) identified the following assumptions researchers should always test when using multiple regression analysis: normal distribution of variables, linear relationship between dependent and independent variables, and homoscedasticity. Therefore, I evaluated assumptions for normality, linearity, homoscedasticity, outliers, independence of residuals, and multicollinearity.

**Normality, linearity, homoscedasticity, outliers, and independence of residuals.** I evaluated normality, linearity, homoscedasticity, outliers, and independence of residuals by examining a histogram (Figure 2), normal probability plot (P-P) of the regression standardized residual (Figure 3), and scatterplot of the standardized residuals (Figure 4), as well as by conducting a Kolmogorov-Smirnov test. The results of these tests indicated there were no violations of these assumptions.

The histogram (Figure 2) indicates a central tendency and therefore a normal distribution of the criterion variable. The tendency of the points in Figure 3 to lie in a reasonably straight line, diagonal from bottom left to top right, supports the assumption of normality. The scatterplot of the standardized residual (Figure 4) indicates no overall pattern, supporting the assumptions. However, I used 2,000 bootstrapping samples to mitigate any potential influence of assumption violations and provide 95% confidence intervals based on bootstrap samples where applicable.

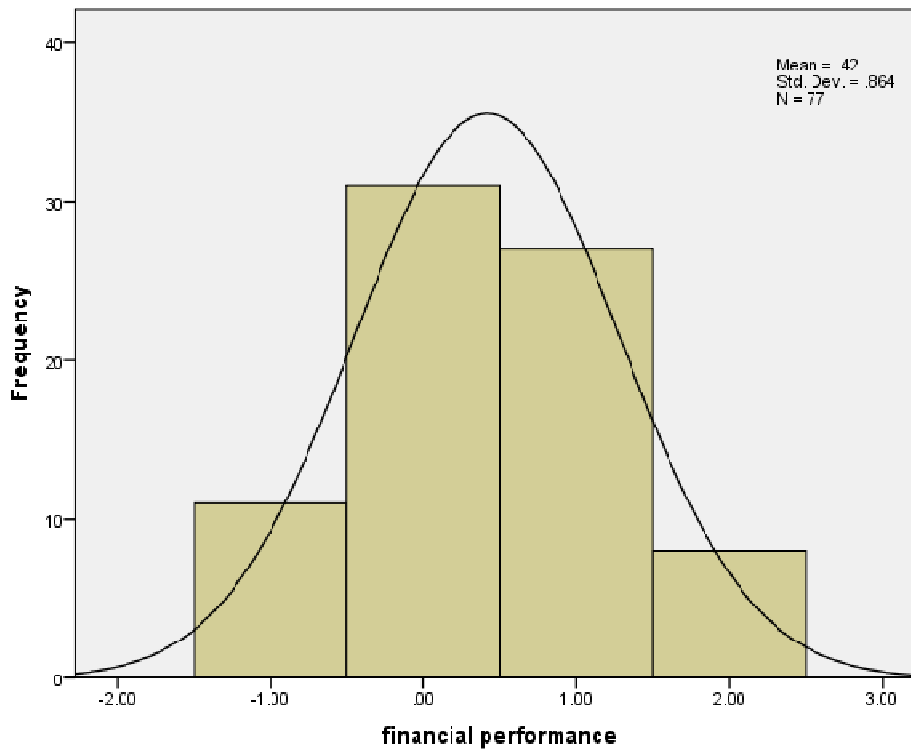


Figure 2. Histogram of the criterion variable, financial performance.

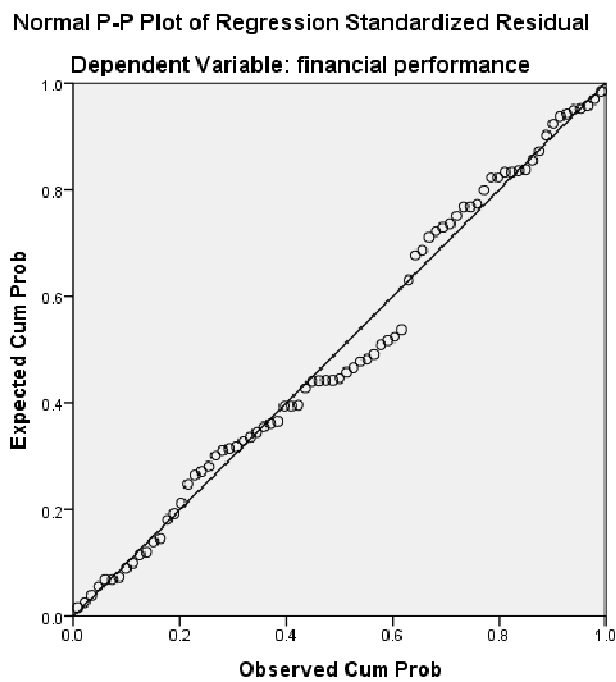


Figure 3. Normal probability plot (P-P) of the regression standardized residual.



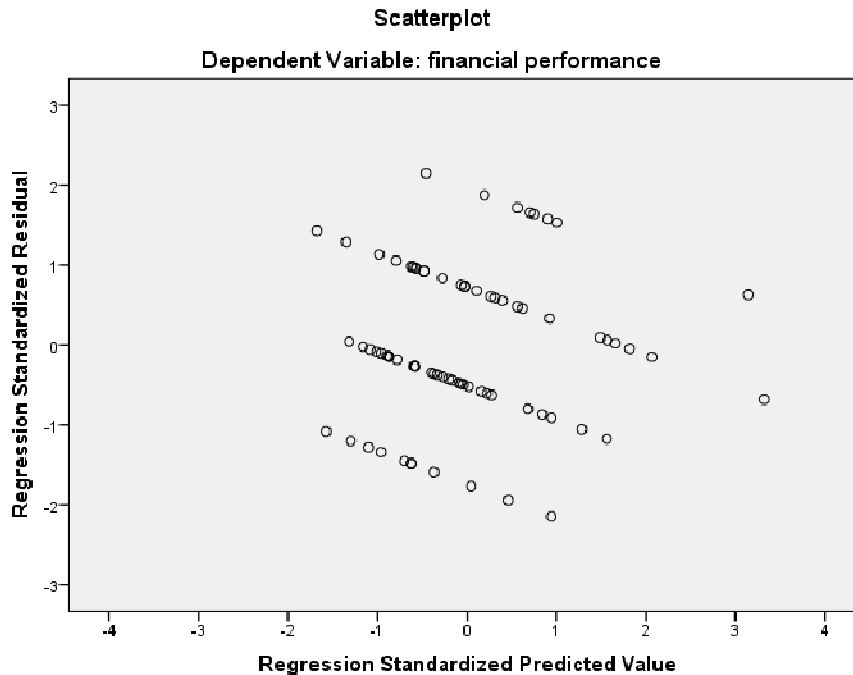


Figure 4. Scatterplot of the standardized residual.

**Multicollinearity.** To test for multicollinearity, I examined the correlation coefficients among the predictor variables. Table 8 contains the correlation coefficients of each pair of predictor variables. All bivariate correlations were small, indicating no violation of the assumption of multicollinearity.

Table 8

*Correlation Coefficients Among Study Predictor Variables*

Variable	Budget planning	Budget control	Business age
Budget planning	1.00	.158	.101
Budget control	.158	1.00	.213
Business age	.101	.213	1.00

Note.  $N = 77$ .

## **Inferential Results**

I used standard multiple linear regression,  $\alpha = .05$  (two-tailed), to examine the effectiveness of budget planning, budget control, and business age in predicting financial performance. The predictor variables were budget planning, budget control, and business age. The criterion variable was financial performance. The null hypothesis was that the linear combination of budget planning, budget control, and the age of the business in small businesses does not significantly predict financial performance. The alternative hypothesis was that the linear combination of budget planning, budget control, and the age of the business in small businesses significantly predicts financial performance. I conducted preliminary analyses to evaluate the assumptions of normality, linearity, homoscedasticity, independence of residuals, and multicollinearity and found no serious violations (see Tests of Assumptions). However, I used 2,000 bootstrapping samples to mitigate any potential influence of assumption violations and provide 95% confidence intervals based on bootstrap samples where applicable.

The model as a whole was able to significantly predict financial performance,  $F(3, 73) = 4.522, p < .006, R^2 = .122$ . The  $R^2 (.122)$  value indicated that the linear combination of the predictor variables (budget planning, budget control, and business age) accounted for approximately 12% of the variation in financial performance. In the final model, budget planning was statistically significant ( $t = 3.307, p < .003$ ). However, budget control and business age did not explain a significant variation in financial performance. The final predictive equation was the following:

Financial Performance =  $.728 + .262(\text{Budget Planning}) - .218(\text{Budget Control}) - .007(\text{Business Age})$ .

**Business planning.** The positive slope for budget planning (.262) as a predictor variable indicated a .262 increase in financial performance for each one-point increase in budget planning. That is, financial performance tends to increase as budget planning increases. The squared semi-partial coefficient ( $sr^2$ ) that estimated the amount of variance in financial performance uniquely predictable from budget planning was .03, indicating 3% of the variance in financial performance was uniquely accounted for by budget planning when controlled for budget control and business age. Table 9 displays the regression summary table.

Table 9

*Regression Analysis Summary for Predictor Variables*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>p</i>	<i>B</i> 95% Bootstrap CI
Budget planning	.262	.086	.331	3.037	.003	[.133, .423]
Budget control	-.218	.122	-.199	-1.789	.078	[-.458, .019]
Business age	-.007	.005	-.159	-1.446	.152	[-.017, .002]

*Note.*  $N = 77$ .

**Analysis summary.** The purpose of the quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses. I used standard multiple linear regression to examine the ability of budget planning, budget control, and the age of the business to predict the value of financial performance. Tests for violations

of assumptions revealed no serious violations. The model as a whole was able to significantly predict financial performance,  $F(3, 73) = 4.522, p < .006, R^2 = .122$ . Budget planning provides useful predictive information about financial performance. The conclusion from this analysis is that budget planning significantly predicts financial performance, even with budget control and the age of the business held constant.

**Application of the findings to the theoretical framework.** One proposition of Churchill and Lewis's (1983) theory is that the level of budget complexity and control increases as a small business grows through the stages of development. Therefore, as a small business progresses through the stages of growth, the usage, complexity, and relative importance of budgets for planning and control purposes should change. I selected three predictor variables based on one of Churchill and Lewis's propositions. According to the theory, one expects to see a significant and positive relationship between the predictor variables (budget planning, budget control, and age of the business) and the criterion variable (financial performance). Budgets associated with higher levels of maturity would, therefore, include more complex types of budgets such as capital budgets and long-range budgets (Umapathy, 1987).

As businesses progress through growth stages, they become more complex, as do their budget processes (Churchill & Lewis, 1983). Therefore, greater use of budgets for planning purposes would indicate advanced stages of organizational growth. Consistent with the theory, the results of the study indicated there was a positive relationship between budget planning and financial performance, which serves as a proxy for growth.

Budget control is the process of comparing budgeted plans and standards to actual financial results, analyzing variances, and taking corrective action (Bedford, 2015; Umapathy, 1987). Consistent with the theory by Churchill and Lewis (1983), greater use of these tools indicates more advanced stages of organizational growth. In this study, I measured budget control using the frequency of budget reviews. The results of the study indicated a negative relationship between the frequency of budget reviews and financial performance, suggesting budget control is not a useful indicator of business growth.

In their theory of stages of growth, Churchill and Lewis (1983) identified early stage firms as those which are small and young, while firms in later stages of growth are large and mature. Churchill and Lewis made a clear connection between the stage of maturity and the age of the firm as it progresses through the stages of the life cycle. However, like budget control, the results of the study indicated a negative relationship between the age of the business and financial performance, suggesting business age is not an effective indicator of business growth. As suggested in the theory developed by Miller and Friesen (1984), the relationship between age and stage of growth is not clear. Miller and Friesen argued that a firm's complexity is due more to growth than maturity and that age alone is not an indication of a firm's stage. Similarly, Lester et al. (2003) indicated the age of the organization and life cycle stage do not always correlate.

### **Applications to Professional Practice**

Budgets are an important element of organizational management and serve multiple purposes. What is clear from the literature and practitioners is that budgets are an inherent part of most organizations and support the primary management functions of

planning, directing, controlling, and decision-making (Sponem & Lambert, 2016).

Because of the pervasive and potentially complex nature of budgets, leaders may fail to understand the importance of budgets to their organizations' success.

Poor financial management, including the lack of budget use for planning and control, often leads to poor financial performance and eventual business failure (Karadag, 2015). Over 390,000 businesses failed in the United States in 2014 (U.S. Census Bureau, 2017), and the primary cause of most business failures is poor planning (U.S. Small Business Administration, 2015). The specific business problem is that some small business leaders lack knowledge about to what extent, if any, budget planning, budget control, and the age of the business predict financial performance.

Leaders and others may use the results of this study to improve business practices in small businesses. Poor financial management, including the lack of budget use for planning, often leads to poor financial performance and eventual business failure (Karadag, 2015). Understanding the relationship between budgets and financial performance may help leaders improve their budgeting process and increase the likelihood of success of small businesses. Specifically, business leaders can use the results of this study to examine their organizations' planning processes and the role of budgets for planning and control purposes. By effectively using budgets for planning, leaders may be able to improve the financial performance of their businesses.

### **Implications for Social Change**

The results of the study may contribute to positive social change. Nearly half of the workforce, or nearly 55 million workers, work for small businesses (U.S. Small

Business Administration, 2014). The 390,000 business failures in 2014 represented 7.7% of all businesses in the United States and affected over 2.3 million jobs (U.S. Census Bureau, 2017). By helping leaders enhance the financial health of small businesses, the study results may be useful to help small business leaders reduce business failures and job losses. Financially strong and healthy small businesses may create additional jobs, helping improve the economic health of local communities.

### **Recommendations for Action**

In this study, budget planning was a statistically significant predictor of financial performance in small businesses. The U.S. Small Business Administration (2015) attributes many business failures to poor business planning. Planning helps leaders develop an appropriate course of action in the face of uncertainty (Brinckmann & Kim, 2015). Planning is beneficial and important for businesses' performance (Brinckmann & Kim, 2015; Hofer et al., 2015; Karadag, 2015). Planning is an important function of business management, and budgets are the primary planning tool used in most organizations. In a study by Lee and Cobia (2013), planning was one of the two primary management accounting aspects that improved decision-making. These and other studies and literature point to the central role of planning and the impact of planning on an organization's success.

Budget planning involves the use of budgets to develop financial forecasts, which can include cash budgets, sales budgets, operational budgets, capital budgets, strategic budgets, and budgeted financial statements (Bedford, 2015; Sengul & Gimeno, 2013; Umaphathy, 1987). Therefore, business leaders, especially those of small businesses,

should use the results of this study to examine their planning processes and use of budgets. As their business grows and matures, leaders should review their organization's budget process and consider expanding the types and complexity of their budgets.

Economic developers and others in local and state government can use the results of this study to assist small business leaders. These officials can help small businesses succeed by emphasizing the importance of planning and the significant role of budgets in that process. In a similar way, business educators, trainers, and consultants can help small business leaders understand the relationship between effective financial planning and financial performance. Providing information and training to small business leaders on how to implement better planning and budgeting practices can improve their businesses' financial performance and likelihood of success.

### **Recommendations for Further Research**

Section 1 included a discussion of two potential limitations of the study that future researchers could address in their studies. First, because the study involves responses from surveys, there could be self-report bias (see Su et al., 2015). For example, a business owner could report business conditions that are not accurate. One way to address this weakness would be to conduct personal surveys where the researcher could ask additional questions to help ascertain the accuracy of reported information. Researchers could also collect data from other sources, such as financial statements, to verify reported information.

A second potential weakness was that the study may not reflect a representative sample of businesses in all stages of maturity. Specifically, there may be a lack of



businesses in the declining stage (see Su et al., 2015). Future studies could include survey questions to identify the stage of maturity of the business at the time of the survey, such as studies conducted by Bedford and Malmi (2015), Lester et al. (2003), and Lipi (2013). Researchers could also increase the sample size and expand the targeted population to include a larger geographic area and use a random sampling method rather than a convenience sample.

As previously discussed in the literature review, other common indicators of financial performance used by researchers, especially in studies of small businesses, involve the level of sales or profit. Bedford (2015) included relative sales growth as a measure of performance in a quantitative study examining the effect of management control systems on firm performance. Likewise, Abdallah and Alnamri (2015) used sales and profit to study financial performance, as did Haron et al. (2014) and Kung et al. (2013). Therefore, future researchers could use other measures of financial performance to possibly enhance the measure of the criterion variable.

The results of the study indicated an inverse, albeit statistically insignificant, relationship between budget control and financial performance. However, expanding the measure of budget control beyond a simple measure of frequency of budget reviews may provide additional insight on the relationship between this variable and financial performance. For example, budget control maturity could include the complexity (detail) of budget reviews and the level of corrective action leaders take based on those reviews, which Kung et al. (2013) examined in their study.

Finally, future researchers could develop a standardized survey for measuring budget planning. As noted in the literature review, no standard measure for budget planning apparently exists. Researchers have used a wide variety of items to examine budget planning (e.g., Arnold & Gillenkirch, 2015; NFIB, 2007; Umaphy, 1987). A standard measure for budget planning could improve the quality of future studies and provide a better understanding of this important area as evidenced by the results of this and similar studies.

### **Reflections**

Prior to conducting this research, I had some preconceptions. For instance, my extensive professional experience working with budgets may have influenced a personal bias toward budgeting as an effective tool for planning and control. A bias toward businesses large enough to employ a financial expert may also exist. Similarly, there may be some bias toward business owners or managers who have formal business education or training and understand technical business terminology and techniques. Finally, this study did not significantly affect my thinking on budget use in small businesses. Personal experience and a review of the literature confirmed my belief that there is a positive correlation between planning and financial performance. My beliefs about the relationship between control or business age and financial performance were more tenuous, so the study added to my knowledge about the role of these variables in small businesses.

## Conclusion

Over 390,000 businesses failed in the United States in 2014 (U.S. Census Bureau, 2017), and poor planning was the primary cause of most business failures (U.S. Small Business Administration, 2015). Poor financial management, including the lack of budget use for planning and control, often leads to poor financial performance and eventual business failure (Karadag, 2015). Budgets are an integral part of most organizations and serve a variety of management functions (Sponem & Lambert, 2016). Because of the pervasive and complex nature of budgets, leaders may fail to understand the importance of budgets to their organizations' success. The specific business problem is that some small business leaders lack knowledge about to what extent, if any, budget planning, budget control, and the age of the business predict financial performance. The purpose of this quantitative correlational study was to examine to what extent, if any, budget planning, budget control, and the age of the business significantly predict financial performance in small businesses.

Using standard multiple linear regression, I examined the ability of budget planning, budget control, and the age of the business to predict the value of financial performance. The model as a whole was able to significantly predict financial performance. As expected, budget planning significantly predicted financial performance. However, the relationship between financial performance and the other two predictor variables, budget control and the age of the business, was not statistically significant. One conclusion from the results of this study is that using budgets for planning may help leaders improve the financial health of their small businesses, potentially reducing

business failures and job losses. Financially strong and healthy small businesses can create additional jobs, improving the economic health of local communities.

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## Appendix A: Survey Questions

1. **Budget planning.** Organizations often use budgets as a primary tool for planning. Leaders use a variety of budget types to plan, including cash budgets, operating budgets, capital budgets, and strategic budgets. A brief description of each budget is provided below.

Please indicate the types of budgets used within your organization (select all that apply).

- No formal written budget is used.
- A cash budget (a budget that projects future cash inflows and outflows)
- An operating budget (a budget that projects revenues and expenses, which is typically linked to sales forecasts and/or production plans)
- A capital budget (a budget that projects future capital expenditures and acquisition dates for major business equipment, vehicles, buildings, land)
- A strategic budget (a long-range budget that projects future requirements beyond one year)
- Other (please indicate): \_\_\_\_\_

2. **Budget control.** In addition to planning, organizations often use budgets for control purposes. A primary method of control is to compare and analyze variances between actual and planned revenues and expenses.

Please indicate the frequency of budget/performance reviews in your organization (choose the response that most closely applies to your organization).

	<u>Seldom</u> or never	<u>Annually</u>	<u>Semiannually</u>	<u>Quarterly</u>	<u>Monthly</u>	<u>Weekly</u> or Daily
We compare and analyze variances of actual to planned revenues and expenses:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. **Financial performance.** One way to measure financial performance of small businesses is by relative sales growth and profit growth (that is, sales and profit growth as compared to competitors).

Please indicate your level of agreement with the following statement regarding your organization's financial performance (choose the response that most closely applies to your organization):

	<u>Low</u> performer	<u>Somewhat</u> <u>low</u> performer	<u>Moderate</u> performer	<u>Somewhat</u> <u>high</u> performer	<u>High</u> performer
Compared to your competitors over the last 3 years*, do you think the overall financial performance of your business in terms of sales and net profits makes it a:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(\*If your business has been in existence for fewer than 3 years, base your response on the total number of previous years.)

4. **Business age**. In what year did your business begin?

\_\_\_\_\_

5. **Business sector**. Is your primary business activity (select the one below that best describes your organization):

- Agriculture, Forestry, and Fishing
- Mining
- Construction
- Manufacturing
- Transportation, Communication, and Public Utilities
- Wholesale Trade
- Retail Trade
- Finance, Insurance, and Real Estate
- Services
- Other (please specify): \_\_\_\_\_

6. **Business size**. Please indicate the number of full-time and part-time employees, including salaried officers and executives, currently employed in your organization:

\_\_\_\_\_ employees

7. **Your position**. Which best describes your position in the organization?

- I am an owner and manage the organization.
- I am an owner but do NOT actively manage the day-to-day affairs of the organization.
- I manage the day-to-day affairs of the organization but am NOT an owner.
- Other (please specify): \_\_\_\_\_

Thank you for taking the time to participate in the study. If you would like to obtain the results of the study, you may send an e-mail to the researcher at [tracy.foster2@waldenu.edu](mailto:tracy.foster2@waldenu.edu), who will provide an electronic copy of the study once approved by the institution.

Important note: By sending an e-mail to the researcher, you will not remain anonymous, but your information will be kept confidential.

## Appendix B: Survey Invitation

(Below is the invitation to participate in the survey.)

Would you like to help small businesses succeed? According to the U.S. Census Bureau (2017), over 390,000 businesses failed in the United States in 2014. The U.S. Small Businesses Administration (2015) indicates that many business leaders could have prevented business failure through better planning. Poor financial management, including the lack of budget use for planning and control, is a primary cause of failure in small businesses (Karadag, 2015).

You are invited to take part in a research study about to what extent, if any, budget use, and business age predict financial performance in small businesses. This study may increase the success of existing and future small businesses and provide increased employment and economic health within the community.

If you agree to participate, you will be asked to complete a very brief survey, which contains several short questions and should take no longer than 5-10 minutes to complete. Any information you provide will be kept anonymous.

If you would like to participate, please click on the following link, which will take you to the consent form and survey.

(link to survey)

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