

IDENTIFYING DEMOGRAPHIC VARIABLES THAT CAN PREDICT ALUMNI
GIVING AT A REGIONAL COMPREHENSIVE FOUR-YEAR UNIVERSITY IN THE
SOUTH

Dissertation

Presented to

The Faculty of the Department of Educational Leadership

Sam Houston State University

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

by

Kelsey M. Christian

August, 2018

IDENTIFYING DEMOGRAPHIC VARIABLES THAT CAN PREDICT ALUMNI
GIVING AT A REGIONAL COMPREHENSIVE FOUR-YEAR UNIVERSITY IN THE
SOUTH

by

Kelsey M. Christian

APPROVED:

Matthew B. Fuller, PhD
Committee Director

Anthony Harris, EdD
Committee Member

George Moore, EdD
Committee Member

Stacey L. Edmonson, EdD
Dean, College of Education

DEDICATION

I gratefully and affectionately dedicate this work to my mother, Ann, and my brother, Colt. My mother instilled in me the value of an education and created an opportunity that fueled my passion for lifelong learning. She lovingly supported my educational ambitions with unwavering praise and encouraged completion of all things commenced. Her heavenly spirit motivated me on the days I wanted to give up, for I knew how proud she was that I was embarking on a journey to a doctoral degree. I know she is smiling down from above as I complete the degree she so adoringly watched me commence. Mom, I love you and miss you dearly. To my brother, I am grateful for your offering of understanding, patience, and encouragement throughout this process. Thank you for your love and support over the past seven years despite the incredible time commitment it took to complete my doctorate degree.

ABSTRACT

Christian, Kelsey M., *Identifying demographic variables that can predict alumni giving at a regional comprehensive four-year university in the South*. Doctor of Education (Higher Educational Leadership), August 2018, Sam Houston State University, Huntsville, Texas.

Colleges and universities across the nation rely heavily on donations from private individuals, especially with the decline in government funding, to supplement operational budgets and support student financial aid. The purpose of this study is to determine if the (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) academic college/major, (f) year of graduation, (g) proximity to campus, (h) professional title, (i) the alumni's level of education, or (j) dual graduate marriage can predict whether or not an alumnus will give back to their alma mater upon graduation. This study explored predicting factors of alumni giving at a regional comprehensive four-year university in the South. Knowing the predicting factors surrounding donations can assist development officers effectively increase alumni giving. A logistic regression of alumni donor history is used to determine the probability of alumni giving. This study found age and race/ethnicity to be statistically significant in predicting alumni giving. The ability to identify demographic variables that can predict alumni who are most likely to give back to their alma mater can greatly enhance the efficiency and effectiveness of fundraising efforts by development officers.

KEY WORDS: Alumni giving, Charitable giving, Alumni donors, Alumni support, Fundraising, Institutional advancement.

ACKNOWLEDGEMENTS

My journey to a Doctor of Education has been filled with many ups and downs along the way and I have many people to thank for helping me achieve my goals. I would first like to thank my dissertation Chair Dr. Matthew B. Fuller for his patience and continued encouragement throughout this extended process. I am grateful for your time, suggestions, feedback, support, and mostly for not giving up on me. I also want to thank the other members of my dissertation committee for their guidance, critiques, and continued support along the way.

I acknowledge the support and encouragement received from my colleagues in Cohort 24. I appreciate the friendships created through this journey and the motivation each of you provided me. We all encouraged each other through this winding journey and I wish you all continued success on your future endeavors. Finally, I would like to thank all my friends and extended family who have encouraged me throughout this process. Jonathan, you can now schedule lunch with the doctor.

TABLE OF CONTENTS

	Page
DEDICATION	iii
ABSTRACT.....	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS.....	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER I: INTRODUCTION	1
Statement of the Problem.....	4
Purpose of the Study	5
Significance of the Study	6
Research Question	7
Research Design	8
Theoretical Framework.....	8
Assumptions	14
Limitations	15
Delimitations.....	16
Definition of Terms	19
Organization of the Study	20
Summary	21
CHAPTER II: REVIEW OF LITERATURE	22
History of Alumni Giving in the United States	22

Demographic Characteristics of Alumni Donors	41
Summary	62
CHAPTER III: METHOD.....	64
Research Question	64
Research Design	65
Summary	74
CHAPTER IV: RESULTS	75
Research Question	75
Description of the Sample	76
Data Preparation	77
Sample Demographics	79
Data Frequencies	82
Findings	82
Summary	85
CHAPTER V: SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS	87
Discussion and Interpretation of Findings	88
Implications	94
Recommendations for Further Research	96
REFERENCES	101
APPENDIX A.....	125
APPENDIX B	126
APPENDIX C	127
VITA.....	128

LIST OF TABLES

Table	Page
1 Independent variables involving demographic variables.....	69
2 Descriptive statistics for age	80
3 Demographic characteristics of the population.....	81
4 Personal characteristics of the population.....	82
5 Race/ethnicity descriptive statistics	84

LIST OF FIGURES

Figure	Page
1 Theoretical Framework.	9

CHAPTER I

Introduction

Institutions of higher education have historically received funding from all levels of government. The primary source of funding for higher education comes from state government in the form of instructional costs, academic support, and institutional support (Weerts, 2014). The federal government funding is a secondary source mainly through student-based financial aid (Eckel & King, 2007; Lee, 2017). However, state funding for higher education in the United States has dropped significantly in recent years—leading to increased tuition to adjust for institutions’ reliance on state funding (Oliff, Palacios, Johnson, & Leachman, 2013). The cost of university tuition has increased drastically over the past 25 years, not only at four-year institutions, but at two-year institutions and community colleges as well (Kim & Ko, 2015; Lee, 2017). The steady increase in university tuition is due largely in part to the decrease in funding for higher education by government agencies (Oliff et al., 2013; Weerts, 2014).

During the Great Recession of 2008 state spending nationwide dropped 28%; every state except North Dakota and Wyoming cut funding for higher education (Oliff et al., 2013, p. 1). Thirty-six states decreased funding for higher education by at least 20%; while, 11 states cut funding by more than one-third. Arizona and New Hampshire decreased state spending for higher education by 50% (Oliff et al., 2013, p. 3). Deep cuts in government funding left universities on their own to raise the funds for the construction of new facilities and improved infrastructures on university campuses (Oliff et al., 2013). The cost of construction and improvement of infrastructures created a major financial burden on universities, especially when student enrollment was on the

rise and the need for new facilities and expanded growth was necessary. The economic downturn of 2009 caused government cutbacks and decreased government spending on higher education, which resulted in government assistance for education to fall to an all-time low (Drezner, 2013). Total state appropriations among all baccalaureate granting institutions have declined by 21% since 2002 forcing public universities to increase net-tuition revenue (Jaquette & Curs, 2015). With the trend of state funding for higher education on the decline, universities and colleges across the United States are relying heavily on the contributions of alumni and other outside donations to supplement the expenses of the institution (Meer & Rosen, 2012). Amidst government funding cuts on higher education, universities began to look elsewhere for funding to supplement their operating budgets. Private giving quickly became the number one source of supplemental funding for higher education (Drezner, 2013). Thus, development officers and higher education leaders are in need of further research on philanthropic giving to assist in their fundraising efforts. Research in the field of alumni giving helps institutional advancement officers effectively solicit donations from new outside sources. The increase in private funding allows university leaders the ability to offset operational costs and financial aid without diminishing the quality of education standards.

In 2016, private donations made to colleges and universities across the country totaled more than \$41 billion, an increase of 7.6% from 2014 (Council for Aid to Education, 2016). Since 2010, private contributions to institutions of higher education have increased fivefold (Council for Aid to Education, 2016). This phenomenon has brought alumni giving to the forefront of most university development programs (Lee, 2017). This trend in alumni giving accentuates the notion that alumni serve as a major

source of revenue for many colleges and universities located in the United States (Weerts & Ronca, 2006). Alumni giving is crucial to a university's operating budget and can be a determining factor in the success of educational institutions. However, in 2016, the State Higher Education Finance Report published by the State Higher Education Executive Officers Association cited an average 3.2% increase in appropriations per student nationwide with the exclusion of Illinois—which saw a drastic decrease in appropriations per student (Seltzer, 2017). Thus, 2016, signaled an upward trend in state funding for higher education. In 2015, the Texas Legislature approved House Bill 100 (2015) authorizing \$3.1 billion worth of construction bonds. Although, the approved funds signaled a relief to universities, \$3.1 billion does not go far enough to cover the cost of new buildings at state universities. Many institutions are still required to contribute at least half of the construction funds out of the university's budget.

In recent years, Proper and Caboni (2014) have investigated the reasons as to why alumni donate to their alma mater and have focused on ways to encourage alumni donors to financially support their institutions. With the rapid increase of private funding to universities and its continued growth, the need for research on alumni donors and the reasons they give; and the predictors of who gives benefits development officers in better identifying prospective donors. Practitioners also understand the benefits associated with determining the characteristics that influence donors to give. This research improved upon the identification of alumni donors by identifying demographic variables that can predict whether or not alumni will financially support their alma mater upon graduation.

Statement of the Problem

University alumni play an integral role in the future of their alma mater. However, the monetary amount and the donor's reason for giving vary greatly between donors and four-year institutions of higher education. Alumni contributions have become increasingly important to institutions of higher education in the United States as the level of state funding for colleges and universities decreases. State appropriations for public universities have declined in comparison to the escalating costs of tuition and educating students and the ability of states to fund higher education (Jaquette & Curs, 2015). The four-year institution of higher education at the core of this study had a fiscal year 2016 operating budget of \$320 million; state appropriations made up less than 25% of the total budget. Thus, to supplement the deficit between the operating budget and the state appropriations, the university relies on student tuition, student fees, along with donations from outside sources such as, alumni, non-alumni, foundations, grants, federal government, business corporations, and miscellaneous sources. With the increased demand for alumni giving, it is becoming imperative to identify the characteristics and demographic variables that connect alumni donors to their alma mater.

Identifying the predictors of alumni giving based on demographic variables is important in the discovery of prospective donors. Current statistical data are not sufficient to predict the variables that are associated with an alumni's potential to give back to their alma mater, especially at the university at the core of this study. "It is the size of the field—and its continued growth—that provides another reason for studying advancement" (Proper & Caboni, 2014, p. 5). Income has been shown to be a primary factor associated with alumni giving (Gottfried & Johnson, 2006). Proper and Caboni

(2014), Holmes (2009), and Bruggink and Siddiqui (1995) have conducted studies on fundraising; however, most of the literature is written by practitioners and not research scholars. A small number of researchers have dedicated their studies to that of university advancement. This has led to a fragmented field of study in which many studies are never published or subsequent work is published in journals many potential readers are not likely to read (Proper & Caboni, 2014). This study focuses on a university where over 170,000 alumni, businesses, and non-degreed alumni have the potential to contribute. The findings of this study could offer insight to similar institutions of higher education and allow development officers to focus their fundraising efforts on alumni who are categorized with a high likelihood to give back to their alma mater.

The researcher determine the predicting factors existing among alumni based on their (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) academic college/major, (f) year of graduation, (g) proximity to campus, (h) professional title, (i) the alumni's level of education, and (j) dual graduate marriage. Within each variable group, the probability of giving back to their alma mater based on demographic variables was determined. The researcher interpreted the meaning, discovered the significance, and communicated effectively the probability of an alumnus to make monetary contributions to their educational institution upon their graduation. Research on alumni giving is an asset to development officers when soliciting donations as well as the university because of the decline in state funding.

Purpose of the Study

The purpose of this quantitative study is to determine if a variety of demographic variables can predict whether or not alumni will financially support their alma mater

upon graduation. The researcher identified, explored, and described the predicting factors of alumni giving at a regional comprehensive four-year university in the South. Results can be used to better identify prospective donors and solicit monetary gifts in support of academic programs and capital projects. A logistic regression of archival alumni donor history was used to determine the probability of alumni giving at a midsized four-year public institution of higher education in the South.

The results of this study will provide university development officers with descriptive data on their donor base that can make the best use of the institution's fundraising efforts, allowing development officers to engage potential donors from recognized populations that are most likely to give back to their alma mater. If development officers are uncertain about which donors have the most potential to give, then many hours can be wasted on unnecessary cultivation efforts. With a clear understanding of the best potential donors, development officers are able to focus on specific populations for optimal results in fundraising efforts.

Significance of the Study

It is important to understand universities and colleges across the United States vary in their size, organizational structure, educational focus, and extracurricular opportunities. Although universities vary, the student and alumni demographics are relatively the same across all universities; thus, research based on alumni can be extended across the spectrum. It is valuable for university development officers to understand the characteristics and demographics that structure their alumni donors. An institution's student enrollment, student body composition, and student experiences can determine the success of annual giving and major gift contributions in the future.

Across the United States, private gifts from alumni are supplementing the budget deficits brought on by state and federal funding cuts to higher education. With the financial success of many universities and colleges reliant on alumni giving, it is important that university leaders understand the patterns and trends of alumni giving behaviors. Through research and analysis of demographic variables of alumni, administrators and development professionals can craft strategic methods to engage alumni donors who have the most giving potential.

It is imperative that university development officers better understand the demographic variables associated with alumni giving so institutional advancement teams can better allocate their time and resources to maximize the funding opportunities. This study examined the probability of alumni giving based on the demographic variables of graduates from a state funded public institution of higher education. The results of this study can also have significance for policy makers and legislators. The findings of this study will provide practical use for university leaders and can lead to new research on a longitudinal basis to determine why alumni are non-donors.

Research Question

Higher education has become increasingly dependent on the financial support of their former students to supplement institutional operating budgets. To better assist development officers in their role as fundraisers, the following research question is addressed: What demographic variables predict the probability of alumni making a financial contribution to their alma mater?

Research Design

To address the research question and determine the predicting factors of alumni giving, a quasi-experimental research design utilizing a logistic regression was applied. A quasi-experimental research design was most appropriate for this study because it allowed for ordinary conditions of comparison groups that were not created using random assignment and does not involve the manipulation of an independent variable (Campbell & Stanley, 1963; Kumar, 2011). The researcher used a logistic regression analysis, as the objective of this study was to predict the likelihood of alumni donors who will donate—or not donate—to their alma mater upon graduation based on several predictor variables. Logistic regression allowed for a diverse set of independent variables. Menard (2010) described the use of logistic regression as being beneficial when both categorical and continuous independent variables exist.

Pedhazur (1997) outlined four assumptions to follow when conducting a logistic regression:

1. The dependent variable is dichotomous.
2. The dependent variable must be statistically independent of each other.
3. The regression model should include all applicable independent variables and it should not include any unrelated independent variables.
4. The categories assigned to the dependent variable are assumed to be mutually exclusive.

Theoretical Framework

There are many theories based on the motivations and catalysts that explain why individuals choose to support their alma mater. Through a scholarly review of the

literature, it was revealed that a majority of philanthropic research is based on sociology, economics, and psychology studies. Many studies and theoretical frameworks focused on alumni giving are based on philanthropic motivation through behavioral predictors. Through many analyses, Okunade (1993) studied and applied the numerous theoretical frameworks associated with charitable giving. Okunade's research established the idea that no single theory can completely explain the reason or the motive of charitable giving. Mann's (2007) research suggested viewing the behavior of alumni giving through multiple theoretical perspectives. Mann's approach can give researchers the insight needed to explain alumni giving characteristics and determine why individuals consider charitable giving. This study focused on three theoretical perspectives to provide a structured framework to analyze higher education fundraising as the theories make for logical correlations that explain why donors are influenced to give back and the characteristics of alumni donors. These theories include: (a) resource dependency theory, (b) pure altruism model, and (c) social identification theory (see Figure 1).

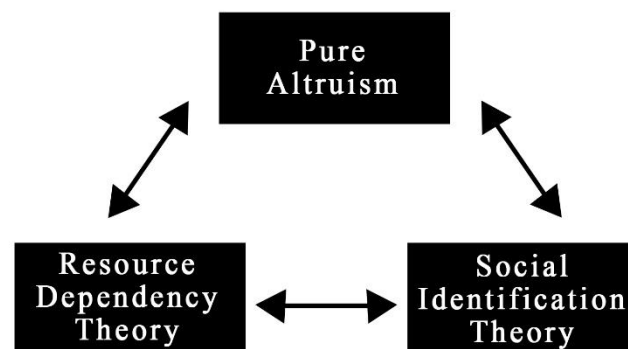


Figure 1. Theoretical Framework.

These theories serve as valuable resources in assisting university advancement staff in their development programs. The theories assisted the researcher in understanding why

alumni choose to give back to their alma mater. The theories presented in this study aided the researcher in explaining the phenomenon of alumni giving.

Resource Dependency Theory

In the last 20 years, the financial sustainability of institutions of higher education has been brought to the forefront of almost all colleges and universities in the United States. The focus on the financial survival of universities has been driven by the continued decrease in state and federal funding. The state and federal funding budget cuts for higher education has forced university leaders to consider alternative ways to acquire the needed financial resources. The idea that institutional survival is based on being able to acquire needed resources (i.e. financial resources, human resources, and other intangible resources) is called resource dependency theory (Drezner & Huehls, 2014). Institutions of higher education are interdependent and must cultivate relationships with alumni and other entities to acquire the needed resources. The resource dependency theory helped explain the need for acquiring resources through higher education fundraising. This theory also supported the notion that it is important for development professionals to have a clear understanding of alumni who are most likely to become giving alumni.

Pure Altruism

Duncan (2004) described the identification of philanthropic giving through impact philanthropy, meaning someone who wants to make a difference. Drezner and Huehls (2014), Piliavin and Charng (1990), and Roberts (1984) have referenced the pure altruism model when conducting research on charitable giving. The pure altruism model is based on an individual's motive to give back through philanthropy. The pure altruism model is

focused on charitable giving that is motivated by the desire of an individual to want to help others (Piliavin & Charng, 1990). The donor may decide to make a monetary contribution based on motivating reasons such as: the financial need of the institution, a feeling of reciprocity to their alma mater, satisfaction of their own college experience, or the financial needs of students. This belief in giving is referred to as altruism (Drezner & Huehls, 2014). Roberts (1984) defined altruism through an economic lens as “the case where the level of consumption of one individual enters the utility function of the other” (p. 137). Drezner and Huehls (2014) stated “altruism exists when the donor disregards his or her own self-interest in order to help others” (p. 2).

Drezner and Huehls (2014) believed that philanthropic gifts are prompted by a mutual benefit. The donor receives recognition and self-satisfaction by the giving of the gift and the recipient of the gift benefits as well. Andreoni (1989) referred to this feeling of satisfaction through giving as a “warm glow” feeling or impure altruism (p. 1448). Andreoni’s warm glow perspective is referred to as the warm-effect theory by economists.

Social Identification Theory

Social psychology-based theories also identify how a donor’s thoughts, behaviors, and feelings are influenced by the imagined, implied, or actual presence of other donors (Fiske, Gilbert, & Lindzey, 2010). Drezner (2011) acknowledged that social psychology is the foundation on which all philanthropic studies should be based, as it establishes the way beliefs and intentions affect our interactions with others. Social identification theory is one social psychology based theory widely used by educational researchers and scholars to explain how individuals relate to groups. Social identification theory evolved

from an individual's perceived membership in a social group based on their own idiosyncratic characteristics and salient group classification (Tajfel, 1978; Tajfel & Turner, 1985; Turner & Oakes, 1986). These groupings of individuals help to foster a sense of belonging in their social networks (Tajfel & Turner, 2004). Social groupings most often affiliated with social identification theory are social class, academic performance, gender, religion, and race (Bong & Clark, 1999; Byrne & Gavin, 1996; Hoffman, Hattie, & Borders, 2005).

Social identification theory is characterized by the idea of individuals wanting and needing to belong to the group that will provide and nurture their sense of social identity (Stets & Burke, 2000). Social identification theory, in relation to higher education, recognizes the fact that individuals tend to classify themselves into social groups based on categorical groupings such as gender, age, college, and major (Mann, 2007). Thompson (2010) credited one's participation in activities as a direct alignment with their sensibilities, this can explain why individuals are more likely to support organizations representative of similar ideals. Alumni develop strong psychological ties to groups based on their college experience; thus, allowing fundraisers to focus on donors who may be categorized into groups to increase their fundraising base. A person's social identity can provide a framework for how categorical groups can increase alumni giving and ultimately predict which alumni groups are most likely to give back to their alma mater.

Social identification theory allows for groups to be viewed in terms of group characteristics while overlooking individual traits which define their individuality. Social identification theory facilitates the association between demographic variables and alumni giving to be validated. Knowing the intergroup relationships of alumni groups

helps predict the probability of alumni giving based on categorical groupings. Using social categorization to group alumni into groups based on gender, age, marital status, ethnicity, and graduation year provides a way of organizing socially relevant information to facilitate in the process of both understanding and predicting behavior (Ellemers & Haslam, 2011).

Alumni groupings and like affiliations such as alumni associations and student organizations may influence alumni giving and be an effective predictor of which alumni are most likely to give back to their alma mater (Mael & Ashforth, 1992; Tajfel & Turner, 1985). For the purpose of this study, it is imperative to establish the categorical groupings of demographic variables in predicting alumni giving; ultimately, social identification theory provided a framework for how categorical groups can increase alumni giving, this can be a valuable asset to fundraisers at the university level.

Resource dependency theory, pure altruism model, and social identification theory are the most widely used theoretical frameworks applied in educational fundraising research. Collectively, resource dependency theory, pure altruism model, and social identification theory formed the theoretical lenses through which to the results of this study were interpreted. These theories best fit the analytical framework of the research question posed in this study. Resource dependency theory explains the need for supplemental funding of higher education. The pure altruism model identifies motives associated with alumni giving. Social identification theory allowed for the analysis of categorical groups based on demographic variables along with predictability factors.

A person's social identity is influenced by how they order themselves into categories or groups, therefore groups with a high level of alumni giving among its

members could be a focal point for development officers when soliciting gifts from alumni. Social identification as a framework for alumni giving can be insightful in providing fundraisers an additional lens to construct donor profiles and execute philanthropic campaigns. For these reasons, resource dependency theory, pure altruism model, and social identification theory were chosen to guide this study.

Assumptions

In preparing for and conducting this study several assumptions were made. First, all subjects of this research were graduates of the regional comprehensive four-year university in the South under study. Secondly, those subjects classified as a donor were assumed to have given a monetary gift of any denomination, post-graduation to the specific university under study. Additionally, if an individual made no gifts to the specific university under study, it is assumed the alumni never gave and is classified as a non-donor.

Another assumption was that all information, as reported by the database at the regional comprehensive four-year university was accurate and up-to-date (i.e. age, gender, race/ethnicity, marital status, academic college/major, year of graduation, proximity to campus, professional title, the alumni's level of education, and dual graduate marriage). This study assumed all information for each individual was correlated to the correct individual regardless of same names or similar names. However, inadequacies could arise as subjects were inputted into the database via human data entry. This method of data entry can run the risk of human error and the wrong information being keyed into the system. This study assumed all entries were correctly entered into the donor database via all methods of input.

Limitations

This study was limited to graduates of a single regional comprehensive four-year university in the South, a state funded public four-year higher education institution. The four-year university is classified as a Doctoral Research University by the Carnegie Commission on Higher Education. University non-degreed alumni—those who attended the university, but did not graduate—were eliminated as the focus of this study was the variables that can predict alumni who financially give back to the university.

Demographic data and alumni information were provided by the Office of University Advancement at the regional comprehensive four-year university in the South. The information in the alumni database was updated in 2014 through a phone survey conducted by Publishing Concepts, Inc. an independent data collection firm. This study assumed that information was accurately reported by those surveyed. The researcher made every effort to insure data were correct, but it was unrealistic to guarantee all data extracted from the advancement database was without error, miscoded data, or other unknown factors that may have produced inaccuracies.

This study was limited by the accuracy of self-reported data pertaining to one's updated demographic variables (i.e. mailing zip code, marital status, professional title, level of education, and dual graduate marriage status). Demographic variables as associated with one's academic enrollment records were reported as factual based on the individuals' student records at the university under study (i.e. age, gender, race/ethnicity, academic college/major, and year of graduation). The self-reported data utilized in this study was reported by students through their university application process. Lohr (2010) stated that self-reported survey data from human subjects can increase the probability of

measurement error. Signifying, human responses as stated can be inconsistent with truthful responses (Lohr, 2010). The findings of this study can be generalized to other institutions of higher education across the United States with similar characteristics. This study focused only on alumni data from a regional comprehensive four-year university in the South. Therefore, references or applicability to other universities and colleges should be used with caution. This study may illustrate ways in which other institutions might explore patterns in alumni giving using their own data and may suggest variables that influence alumni giving as future research is conducted.

Future research could be conducted to observe any factors influencing why alumni do not donate to their alma mater. However, the researcher chose to focus on implications and recommendations that may aid development officers in predicting which alumni are most likely to give to their university. By focusing on alumni who are classified as most likely to donate will allow for a more efficient and effective approach to fundraising strategies.

Delimitations

This study was delimited to the examination of demographic variables that can predict alumni giving at a regional comprehensive four-year university in the South. The existing dataset used was provided by the Office of University Advancement at the regional comprehensive four-year university in the South under study. Analyzing data from a single institution restricted the scope of the findings of this study and limited the conclusions of the study. This study used archival data to analyze demographic categories provided by the institution under study. The delimitation of categories included ethnic and racial groups as reported by the regional comprehensive four-year

university in the South. As such, race/ethnicity variables were limited to Hispanic/Latino, African American, White, American Indian or Alaska Native, Asian, and Native Hawaiian.

Data were limited to all living graduates of the institution that financially supported their alma mater as reported by the university's Office of University Advancement. This limited the findings of the subset of the alumni population to those with a mailing address in the database where the distance a donor lived from campus could be analyzed based on their zip code. This study only included private voluntary giving from individual donors. The research did not include other forms of giving such as research grants, corporate giving, non-profit foundation giving, or student financial loans. Hence, the results of this research study do not accurately summarize total giving to the regional institution under study.

A further delimitation was the focus on graduates with a baccalaureate degree or graduate degree from a regional comprehensive four-year university in the South. This was a purposeful decision to increase the generalizability of predicting variables. Results from this study can be used to focus fundraising initiatives towards current and future students of the university. Thus, allowing for strategic approaches to engaging students who fit within categories of those most likely to give back to their alma mater post-graduation.

For this study, donors were classified as any graduate of the university under study who had voluntarily given a charitable contribution of any denomination post-graduation. The researcher determined which alumni were most apt to give back to their alma mater based on specific demographic variables. Non-donors were classified as any

graduate of the university under study who had not given a charitable contribution to their alma mater post-graduation. Determining why non-donors do not contribute to their alma mater requires in-depth qualitative analyses through survey research and face-to-face interviews. The focus of this study was to identify those individuals with the greatest probability of being a donor. Knowing which demographic groups are most likely to give back can assist development officers in turning non-donors into donors. Future research on how to turn non-donors into donors could prove beneficial to higher education fundraising. All while encompassing the underlying reason as to why non-donors do not give monetarily to their alma mater.

The final delimitation posed by this research study was that a number of research subjects were missing or have unreported information pertaining to their age, gender, race/ethnicity, marital status, academic college/major, proximity to campus, professional title, the alumni's level of education, and dual graduate marriages. Therefore, it caused challenges when analyzing data. Nonetheless, this study laid a foundation to further additional studies pertinent to alumni giving.

Upon receiving the dataset from the Office of University Advancement, four independent variables were deemed insufficient for analysis. Proximity to campus was not reported as a distance from campus, therefore, for the purpose of this exploratory study the distance variable was omitted from this study. Dual graduate marriages and professional title were originally considered as variables for this study. However, neither data identifying dual graduate marriages nor professional title were available from the institution and for that reason, the researcher did not include dual graduate marriages or professional title as independent variables in this study. Additionally, data pertaining to

academic college/major was too vast to analyze in the given timeframe; thus, academic college/major was eliminated as an independent variable. The institution awarded over 400 diverse types of degrees in the timeframe under consideration in the present study. Several of these degrees had many graduates in one year and few or no graduates in later years. In an attempt to construct the most parsimonious model possible these data were eliminated from the present analyses.

Definition of Terms

Below is a list of defined terms used in this study to assist the reader in understanding general words used in the research. Operational definitions were developed. The following terms were pertinent to this study:

Advancement of development. The process of raising funds through the identification of donors, the cultivation of donors, the solicitation of a gift, and the stewardship of the gift (Worth, 1993).

Baby Boomers. A demographic cohort of the population born between 1946 and 1964 (Williams, 2007).

Constituents. A collective group of all university stakeholders including administrators, alumni, corporations, donors, faculty, staff, and students.

Development officer. A university employee who assists with fundraising activities and donor relationships, including the identification of prospects, cultivation of donor relationships, solicitation of gifts from a donor, and stewardship of the donor's gift to the university (Kelly, 2000).

Donor. Any person, business, corporation, or foundation that contributes funds to the university.

Dual graduate marriage. A married couple where both spouses received a degree from the institution under study.

Fundraising. The process of soliciting financial resources to promote the overall goals of the institution.

Generation X. A demographic cohort of the population born 1965 and 1979.

Gift or giving. A voluntary, irrevocable transfer of something of value.

Institutional advancement. The unit in colleges and universities often referred to as university advancement, which is directed by the vice president and includes development officers and donor researchers.

Major Gifts. Large financial commitments from individuals to the university, the dollar amount of major gifts can vary greatly among universities. For purposes of this study, a major gift was defined as greater than \$25,000.

Mature Donors. A collective group of the population born before 1945 (Williams, 2007).

Millennials. A generation of the population born between 1980 and 2000 (Milkman, 2017).

Proximity to Campus. The distance a donor lives from the main campus of the university under study based on the donor's self-reported zip code.

Young Donors. A collective group of the population between 18 years of age and 39 years of age (Williams, 2007).

Organization of the Study

This dissertation is organized into five chapters. Chapter I provides an introduction to alumni giving and outlines the basis of this study. A review of the

literature as it pertains to alumni giving is presented in Chapter II. The methodology of the research is detailed in Chapter III and includes the research method, population, and data collection. Chapter IV presents the major findings of data collected from the regional university under study. Lastly, Chapter V summarizes data findings, discusses implications pertaining to the findings of this study, and offers recommendations for future research studies on higher education fundraising.

Summary

A predictive analysis used to determine alumni fundraising can assist development officers—at the university being studied—in identifying the right donors for specific giving opportunities and increase effectiveness of fundraising strategies. The importance of further research surrounding alumni giving is essential for institutions of higher education as it allows for greater reliability in identifying potential donors and their philanthropic interests. Institutions of higher education are finding it necessary to increase individual university monetary support as a way of lessening the burden of diminishing governmental financial support. Therefore, predictive demographic variables may assist fundraisers in strategically identifying and soliciting perspective donors for gifts to the university and significantly reduce the university's operational costs.

CHAPTER II

Review of Literature

Focusing on existing research, this literature review will describe historical trends of alumni giving to institutions of higher education and assess the importance of alumni giving as it relates to the continued financial success of higher education. This chapter will review the history of alumni giving in the United States, demographic variables of alumni donors, the role of fundraising in higher education, and the need for further research on alumni giving. Knowing specific characteristics of a university's donor base that can predict an individual's probability of making a gift to the institution proves beneficial to university advancement personnel, especially at four-year universities where little to no donor research has been conducted.

History of Alumni Giving in the United States

In the United States, alumni giving has been around since the establishment of the first institution of higher education, New College, in 1636. New College was later named after its first benefactor John Harvard. Harvard, who upon his death in 1638 left his library of 400 books and half his estate, an approximated value of £780, to the institution (Cash, 2000; Cobban, 2002; Cutlip, 1965; Frank, 2014; Fuller, 2014; Rudolph, 1990). John Harvard's generosity through a bequest to New College offered the institution an opportunity to hire faculty and build academic buildings—all of which helped to attract new students (Fuller, 2014). In American History, John Harvard is often referred to as the first higher education philanthropist.

John Harvard's bequest was the first of its kind. Harvard's gift not only solidified itself in history, but it compelled others to give back to the college (Frank, 2014). Soon,

wealthy settlers began to support education across all levels. In 1643, Harvard College established its first endowed scholarship. Lady Anne Radcliffe Mowlson gifted £100 to Harvard College. Lady Mowlson requested the interest from her principle gift be designated to financially assist underprivileged students pursuing an education (Mowlson, 1643; Fuller, 2014). Again, this lead gift from Lady Mowlson motivated other affluent Colonials to direct their charitable contributions to institutions of higher education.

Shortly after Harvard College received its first bequest, there was an organized fundraising initiative by clergymen, William Hibbens, Thomas Weld, and Hugh Peter, whom crossed the Atlantic Ocean to solicit money from King Charles I (Cutlip, 1965; Frank, 2014). The clergymen were successful in their fundraising efforts receiving approximately £500 from the Monarchy (Brittingham & Pezzullo, 1990). The solicitation of funds from the Monarchy and their continued support showed the importance of higher education in the New World. Hibbens, Weld, and Peter can be called the first development officers of higher education in America. Their pioneering efforts to solicit funds from an outside source in support of higher education signaled the beginning of fundraising initiatives in higher education.

The clergymen's successful solicitation for financial support of higher education prompted Henry Dunster, the first president of Harvard College, to create a publication known as "New England's First Fruits". This publication described the importance of public support as it related to the success of Harvard College. The brochure was created with the intent it would generate interest among stakeholders and increase philanthropic giving among wealthy colonists (Morison, 1935). "New England's First Fruits" is the

first known fundraising brochure in America (Cook & Lasher, 1996; Drezner & Huehls, 2014).

Following the success of Harvard College and the population growth of early America, the need for higher education became prevalent among colonists. Thus, there was an increase in the number of colleges and universities being established in the colonies. The College of William and Mary in Virginia was founded in 1693 and the Collegiate School in Connecticut (later named Yale University) opened its doors in 1701. These institutions received annual funding from the King of England, but the amount of support offered was insufficient to sustain the continued growth and development needs of the colleges (Sears, 1990). The early years of higher education in America saw many financial hardships.

The financial shortcomings of the schools required college presidents be tasked with the role of soliciting additional funds for the institution. It did not take administrators long to realize the financial needs of the institution could benefit greatly from the philanthropic efforts of colonists. Many of the gifts received by the educational institutions were attained by the active solicitation of wealthy private individuals. The financial support of the colleges came in the form of cash contributions and bequests through an individual's estate. However, noncash gifts were often accepted in the form of books and land donations. Intermittently, other noncash gifts of grain, crops, candles, chickens, lumber, and other dry goods were accepted by colleges (Cash, 2000; Drezner, 2011). Gifts of material goods from individual donors could be sold and converted into cash for the college's benefit (McAnear, 1952). Oftentimes, the college official solicited donations directly from the individual donor. However, the pulpit on Sunday was

sometimes used by college presidents as a platform to solicit gifts from the congregation to support the needs of higher education.

Until 1745, Harvard College, College of William and Mary, and Yale University were the only established institutions of higher education in America. In the years preceding the American Revolutionary War, six additional higher education institutions were chartered:

1. College of New Jersey, 1746 (established as Princeton University in 1896).
2. College of Philadelphia, 1749 (now the University of Pennsylvania).
3. King's College, 1754 (renamed Columbia College in 1784 and then Columbia University in 1814).
4. Rhode Island College, 1764 (now Brown University).
5. Queen's College, 1766 (renamed Rutgers University in 1925).
6. Dartmouth College, 1769.

The six newly established colonial colleges all had one thing in common, the need for supplemental financial support. Like the educational institutions established before them, these colleges also sent university leaders abroad to England to solicit monetary support from the Monarchy, with the exception of Queen's College (Cash, 2000). Queen's College was associated with the Dutch Reformed Church; thus, the college's representatives were sent to Holland to ask for financial support for their institution (Curti & Nash, 1965).

The colonial colleges found financial stability through the generosity of many American and British citizens who valued the importance of higher education. The much-needed financial support for the institutions came in the form of charitable cash

donations (Cutlip, 1965). The emerging public interest placed on education provided an opportunity for college administrators to translate the importance of an education into the need for financial support. The evolution of soliciting funds for the financial sustainability of educational institutions had begun to take shape. The solicitation process of private donors by college representatives started to evolve into a systematized process. Early on, organized methods of fundraising were developed to increase the fundraising success of college agents (McAnear, 1952).

The requests for financial support for the colonial colleges continued in England until the start of the American Revolution (Brittingham & Pezzullo, 1990). With the onset of the Revolutionary War, charitable contributions once dedicated to higher education were being redirected to help in the war efforts (Fuller, 2014). The Revolutionary War caused serious financial concerns for the colonial colleges. Administrators from the nine colleges had succeeded in obtaining funds for buildings, equipment, and books, but lacked the funds needed for sustainability throughout the war. Student tuition only adjusted for a small portion of the institution's overall expenses. However, King's College was the only institution to have established an endowment large enough to sustain operations and maintain a balanced operating budget throughout the war (Sears, 1990). Once again, private giving proved necessary in lowering the operating deficit of the colonial colleges (McAnear, 1952).

Following the American Revolution, the United States experienced many changes. The end of the Revolution catapulted the westward expansion and the colonization of new territories. The westward expansion also gave way to the establishment of new colleges and universities.

With the creation of new institutions of higher education came the need for funding. State governments often provided the land on which the institutions were built, but there was no guarantee of continued financial support from government entities following the government's gift of land (Zunz, 2012). Thus, newly established colleges faced many financial burdens. During this time of expansion there were no large gifts from individuals to support higher education. Most of the funding during this time came from small private contributions. Citizens from all socioeconomic classes were solicited by college administrators for financial support. After soliciting a broad assortment of proposed donors, college administrators, found the most receptive donors were located in the areas their students called home (Oliver, 1999).

In the first 100 years of the newly founded United States of America, leading up to the Civil War, approximately 200 colleges and universities were established (Brittingham & Pezzullo, 1990; Rudolph, 1990). The influx of institutions of higher education in such a short amount of time caused a shortage of financial recourses. There was not enough government funding to adequately support all the colleges (Thelin, 2011). Once again, the country succumbed to war. The financial sustainability of higher education, once again, was uncertain.

Educational administrators soon realized their financial support from legislators was going to be drastically reduced (Thelin, 2011). This realization came from the economic setbacks brought on by a country at war. Thus, universities across the United States turned to private giving to ease the burden of budget cuts. The days of fully funded public universities had ended. According to Rudolph (1990), following the Civil

War, university alumni became the focus of fundraising efforts at American institutions of higher education to ease the financial burdens of the institution.

University affiliated assemblies comprised of graduates began to develop in the mid-1800's. Those associations eventually became known as alumni associations, which were comprised of the socially elite of the university. Many alumni association members used the organization to extract political power and wealth. The elite individuals began donating large sums of money to the private institutions associated with the organization (Hall, 1996). In the 1860's, amidst the need to establish a way to stay connected with other graduates from their alma mater, alumni organized into associations (Curti & Nash, 1965). These newly established alumni associations gave way for university leaders to orchestrate private funding initiatives.

Morrill Land Grant Act

Justin Smith Morrill, a United States Congressman from Vermont, envisioned a national system dedicated to vocational education (Simon, 1963). Morrill, born in 1810 was the son of a blacksmith and lacked a college education. He retired from a successful merchant business at the age of 38 only to be elected to Congress in 1854. Congressman Morrill first introduced the Morrill Bill to congress in 1857 as a way create opportunities to educate citizens on a vocational trade. In 1862, Congress formally passed the Morrill Land Grant Act which created a new way of subsidizing higher education. The act financed agricultural and mechanical education at institutions throughout the United States to ensure an education could be obtained across all social classes (Veysey, 1965). The Morrill Act provided states with 30,000 acres of federal land for each member of congress the state had. Institutions were financed by the sale of the federal land. The

proceeds from the sale of the land were placed in an endowment to generate a perpetual income stream to fund land grant universities. In total, the Morrill Act of 1862 allocated 17,400,000 acres of land for the benefit of public education. The sale of all the land yielded a collective endowment of \$7.55 million (Whalen, 2001). The federal funding set forth by the Land Grant served as an agent of change for the creation of state funded institutions of higher education.

Proceeds from the land grant endowment were to be used to support at least one college whose primary objective was to educate, through scientific and classical studies topics related to agriculture and the mechanical arts. Teachings of said colleges were also to include military tactics. The Land Grant Act created an opportunity to offer a practical and scientific based curriculum to students from all social classes.

States receiving a land grant had two years to accept the conditions outlined by Congress through the Morrill Act. Upon acceptance of the land grant, states had five years to complete the sales transaction of the land and establish a viable endowment. The proceeds from the endowment could not be used for the purchase, the erection, the preservation, or the repair of any existing buildings associated with a college or university.

The end of the United States' Civil War and Morrill Land Grant Act marked a change in higher education; as the traditional curriculum centered on religious and moral values moved towards knowledge based education and training. The restructuring of higher education from a religious based learning experience to a practical learning experience came from the monetary influences of many wealthy entrepreneurs and the social elite. This gave way to the establishment of private colleges and opened the doors

for the formation of public institutions of higher education (Curti & Nash, 1965). The Morrill Act created access for higher education for rural Americans. By 1889, the Morrill Land Grant Act had provided financial assistance to 48 state colleges. Thirty-three colleges out of the 44 colleges having received land grant funding were newly established institutions of higher education (Cash, 2000).

In 1890, the second Morrill Act was passed. The Morrill Act of 1890 mandated the federal funds for state education—as allocated by the Morrill Act of 1862—be extended to institutions of higher education that enrolled African Americans (Brown & Davis, 2001). At the time the second Morrill Act was enacted the Southern United States was segregated. Many southern states established separate public institutions of higher education known as Historically Black Colleges and Universities (HBCUs). The purpose of HBCUs was to have a legal beneficiary for the federal funds provided by the Morrill Act (Brown & Davis, 2001).

The end of the Civil War marked the beginning of the nation's economic expansion and industrialization period. The country's democracy was flourishing and its economic growth allowed individuals to accumulate new wealth like never seen before (Rudolph, 1990). Higher education during this time had experienced rapid growth (Drezner, 2011). Enrollment at colleges across the country by the 1870's had "increased five-fold" (Lucas, 2016, p. 147). Increased enrollment at higher education institutions was mostly due to the 60% increase in the population between 1860 and 1880 (Lucas, 2016; National Center for Education Statistics, 1997). In 1870, there were 62,000 students enrolled at institutions of higher education in America (Lucas, 2016, p. 147). In 1890, student enrollment had risen to 157,000 students and by 1910 the enrollment in

institutions of higher education in the United States had escalated to 355,000 (Lucas, 2016). With the rapid growth of enrollment, came the need for additional funds and the universities deemed the most successful were led by administrators who were effective fundraisers (Drezner, 2011). For centuries, voluntary support has been a part of higher education. In the beginning of higher education in the United States, fundraising efforts were led by the president of the institution. From modest gifts of livestock, blankets, and books to multimillion-dollar gifts, the methods of giving have evolved over time. Parallel to the evolution of the types of gifts received by institutions of higher education so have the approaches of fundraising by administrators. In colonial times, fundraisers were known as honorable beggars. With the passing of time fundraising has evolved into a systematic approach set forth by skilled development personnel.

In the late 1890's and early 1900's, government leaders began to see higher education as a way to improve economic development (Miller & Casebeer, 1991). Higher education was seen as a necessity in the success of the nation and state funding of public institutions increased. State legislatures began to support the rapidly growing enrollment rates at institutions of higher education through tax appropriations. These increases in appropriations were due in part to the growing wealth of the country and the expanding tax base (Cohen, 2007). Public universities located in states west of the Mississippi River received almost half of all higher education funds from the state between 1920 and 1940 (Cohen, 2007, p. 163). The federal government also provided financial support to institutions of higher education through the Smith-Lever Act of 1914 which authorized funds for agriculture and home economic programs. The Smith-Hughes Act of 1917 allocated funds for the training of vocational education teachers and

in 1930 the Public Works Administration provided assistance in the construction of residence halls at institutions of higher education (Cohen, 2007). Despite the Great Depression, the growth rate of federal funding for higher education from 1930 to 1940 was only 6.6% lower than in previous decades (Cohen, 2007, p. 165). Regardless of the amount of financial support provided by the state and federal government, colleges and universities continued their quest to find funds from alternative sources.

Administrators from public institutions of higher education began to realize the benefits of voluntary support from individuals as a way to ease the burden of declining state and federal financial support (Curti & Nash, 1965). The voluntary support from individuals was an added revenue source for colleges and universities which aided in the funding of capital projects, academic program support, and other discretionary needs of the institutions. With the turn of the century educational fundraising grew in popularity. The economy in the United States was booming and business owners were looking for areas to invest their newly acquired wealth. Voluntary support of higher education seemed a natural philanthropic fit for the wealthy entrepreneurs as they were seeking ways to educate a younger generation of future business owners. Iconic entrepreneurs and businessmen whom had assumed massive wealth began to see the economic benefits of higher education and started to provide support for the enhancement of public education. Wealthy individuals most notable for their philanthropic gifts to higher education and whose name some institutions would bear included:

1. Andrew Carnegie's gift of \$2 million in 1900 founded the Carnegie Institute of Technology. Known today as Carnegie-Mellon University (Cutlip, 1965).

2. Abiel Chandler helped establish the Chandler School of Science and the Arts at Dartmouth College.
3. Ezra Cornell gifted his farmland and an additional \$500,000 for the creation of Cornell University in 1865 (the first established land grant university) (Brittingham & Pezzullo, 1990).
4. Washington Duke was influential in moving Trinity College to Durham, North Carolina. Duke's financial commitment to the college in 1892 required the enrollment of women (King, 1991).
5. Johns Hopkins bequeathed \$7 million to create a university and hospital in Baltimore in 1879 (Curti & Nash, 1965).
6. Abbott Lawrence financially assisted in creating the Lawrence Scientific School at Harvard University.
7. John D. Rockefeller, in 1884, provided funding for the establishment of a small African American women's college in Atlanta (later named Spelman College). In 1890, Rockefeller gifted \$80 million to establish the University of Chicago (Goldin, 1988).
8. Leland Stanford and his wife Jane Stanford made a contribution of \$40 million to found Stanford University in 1885. The Stanford's wealth derived from his railroad business. The gift was made in memory of their only child (Tutorow, 2004).
9. Cornelius Vanderbilt originally decided to establish a university in New York. Vanderbilt was persuaded by a clergyman to gift \$1 million to establish a university in Tennessee (Bruce, 2003).

10. Joseph Wharton conceived the idea of a school that could teach economic matters dealing with business cycles and how to run a business. In 1891, Wharton donated \$100,000 for the establishment of the Wharton School of Business at Penn State University. The Wharton School was the first of its kind to include curriculum on business, finance, and management.

These individuals donated large amounts of their personal wealth to build libraries, colleges, and museums across the country (Brittingham & Pezzullo, 1990; Sears, 1922). These key figures provided the foundation for which higher education fundraising has built on for generations. The generosity of these philanthropists helped inspire the growth and evolution of fundraising in higher education (Miller, 1993).

The 20th century brought about many changes in the United States and produced a philanthropic movement establishing public service organizations such as the American Cancer Society, Boy Scouts of America, Girl Scouts of America, and the Red Cross to name a few. The need for private funding to support the worthwhile endeavors of service organizations generated the need for formalized fundraising techniques (Cutlip, 1965). The continued success of fundraising efforts led to the development of capital campaigns and new techniques to raise monetary support for the different organizations. The increased demand on private funding led to the creation of consulting firms specializing in fundraising and professional fundraising companies (Brittingham & Pezzullo, 1990; Cutlip, 1965).

Academic administrators began to look closely at new ways to attract the attention of individual supporters. Harvard College hired alumnus John Price Jones, a private fundraiser, to oversee the Harvard Endowment Fund Campaign (Curti & Nash, 1965).

Jones sought financial support through a public relation based campaign (Drezner, 2011). In 1919, Harvard's Endowment Fund Campaign surpassed its initial fundraising goal of \$10 million; by raising \$14.2 million. Jones later went on to establish a professional fundraising business named the John Price Jones Company (Brittingham & Pezzullo, 1990). Following John Jones's success on raising funds for a campaign other colleges and universities followed suite and began employing development officers to coordinate institutional fundraising initiatives (Cook & Lasher, 1996).

By the 1920's, development officers had become an essential part of most colleges and universities and capital campaigns were quickly gaining popularity as a way of raising money for academic support (Miller, 1993). The Great Depression had devastating effects on the success of development officers and capital campaigns (Brittingham & Pezzullo, 1990). In 1935, amid the emerging practices of unethical fundraising efforts, nine of the major fundraising firms came together to form the American Association of Fundraising Counsel (AAFC) (Brittingham & Pezzullo, 1990). The AAFC was originally devised as a way of discussing professional ethics among industry leaders and exchange fundraising ideas and techniques.

The end of World War II, signaled a rapid increase in the number of students enrolling in institutions of higher education. The Serviceman's Readjustment Act of 1944, also known as the G. I. Bill, provided funds for tuition and living expenses to attend college or vocational schools, low cost mortgages, and low interest business loans for veterans returning from World War II. Many of the veterans returning from the war were choosing to use their G. I. funds to obtain a college education. To accommodate for

the influx in student enrollment numbers and to assist with the handling of the G. I. Bill funds, universities actively began to hire fundraising and development staff.

A major turning point in university fundraising efforts and university advancement came in 1958. More than 70 academic administrators, development officers, industry leaders, along with alumni association administrators gathered at the Greenbrier Hotel in West Virginia. The gathering of academic professionals was organized by the American Alumni Council and the American College Public Relations Association to generate institutional support strategies for the continued growth of development and fundraising efforts within higher education (Cook & Lasher, 1996). The three-day conference, later referenced as the Greenbrier Conference, sought the collaboration of industry leaders to focus on a unified effort of targeting alumni for monetary solicitations to their respective alma mater. What emerged from the group efforts was a document titled *The Advancement Understanding and Support of Higher Education*. This document would become the cornerstone of institutional advancement as we know it today (Richards & Sherratt, 1981). Since the Greenbrier Conference, fundraising has become systematic and in modern times become a necessity for all institutions of higher education. Another important aspect that emerged from the Greenbrier Conference was the recommendation that the individual areas of communications, fundraising, public relations, and alumni relations come together under one umbrella to be known as institutional advancement. The newly established umbrella of institutional advancement would be coordinated by a university vice president or chief administrator.

Student enrollment continued to rise in the 1960's and 1970's. As did the sophistication and strategic process of fundraising which focused on targeted solicitations of alumni and individual cultivation techniques (Sears, 1990). During this time, colleges and universities were consolidating fundraising efforts and creating institutional advancement offices (Brittingham & Pezzullo, 1990). The added development personnel at colleges and universities along with a centralized office for advancement incentivized professional development associations to coalesce. In 1974, the American College Public Relations Association and the American Alumni Council merged to become the Council for Advancement and Support of Education (CASE) (Cook & Lasher, 1996). CASE is known today as the premier international professional organization for all areas of institutional advancement.

In the 1980's colleges and universities found it hard to balance their operational budgets due to the lingering effects of the spending reductions in the previous decade. To offset the operational deficit, university leaders drastically increased the cost of tuition (Toutkoushian, 2003). Colleges and universities had begun to rely heavily on student tuition to share in the cost of obtaining a college degree. Public institutions of higher education saw a greater need to supplement the declining funds provided by state appropriations through increased student tuition (Hartley, 2009; Sax, 2000; Weerts, 2014).

By the mid-1980's, government spending on higher education had been reinstated. However, government subsidizing of higher education was short-lived, as the 1990's approached universities and colleges again saw major declines in governmental spending for higher education. The stock market crash in 1989, double-digit inflation

figures, and state budget cuts all factored into the reduced government spending on higher education.

The 1990's marked the end of the Cold War with Russia. However, the decade gave way to yet another economic recession. The weakened economy and the increased competitiveness for state support of social services such as welfare, primary and secondary public education, government housing programs, health care, and public infrastructures served as more pressing needs than higher education (Altbach, Berdahl, & Gumport, 2005; Jenny & Arbak, 2004; Kane, Orszag, & Gunter, 2003; Rizzo, 2004; Schuh, 1993; Weerts, 2014). To supplement funding for much needed social services, higher education again experienced a decline in government funding (Hauptman, 1997). "The recession of the 1990's marked the beginning of a prolonged fiscal crisis in American higher education" (Barrow, 2010, p. 322). The recession of the 1990's meant another hike in student tuition at colleges and universities (Weerts & Ronca, 2007; Schuh, 1993). Fortunately, the recession during the early-1990's was short-lived. Throughout the next 10 years, the American economy experienced record growths in productivity, low unemployment rates, skyrocketing stock prices, and low inflation. This economic boom lasted until 2007.

The 2000's brought on economic struggles which included the fall of the dot-com era, several accounting scandals among major corporations, and the devastating event of September 11, 2001. Furthermore, the economy worsened in 2008 with the housing crises and the demise of several influential lending firms amidst a credit crisis (Mitchell, Leachman, & Materson, 2017). According to Weerts and Ronca (2006), supplemental

funding for higher education from the state experienced the greatest reduction during times of major economic recessions.

In 2017, there was much discussion about the proposed tax reform and how it would impact charitable giving. In the months preceding the final draft of the Tax Cuts and Jobs Act of 2017 many nonprofit organizations were anxious about the adverse effects the tax reform could have on charitable contributions. In December 2017, the United States Congress signed into effect the Tax Cuts and Jobs Act of 2017 signifying the largest tax reform initiative since 1986 (Sharpe & Mann, 2017). The final draft of the tax reform bill preserved charitable deductions for tax payers. The final legislation increased the charitable deduction of tax payers—the amount of charitable gifts that can be deducted each year increased from 50% of adjusted gross income in previous years to 60% of adjusted gross income in 2018 (Sharpe & Mann, 2017). The speculation of a decrease in charitable giving in 2018 was caused by the uncertainty of a finalized tax reform legislation. Based on the final legislation, the impact of the 2017 tax reform will have little to no impact on charitable giving by most upper-middle class and higher-income donors (Sharpe & Mann, 2017). In fact, the Indiana University Lilly Family School of Philanthropy (2018, p. 3) projected charitable giving to increase in 2018 due to the overall positive economic impact of the Tax Cuts and Jobs Act of 2017.

The average cost of university tuition in the United States has steadily increased over the last 40 years and has become a global phenomenon (Kim & Ko, 2015). Increased tuition rates were implemented to offset the decrease in state and federal financial support of higher education. Another source of supplemental income institutions of higher education have capitalized on is that of monetary gifts from alumni.

In 2015, charitable contributions accounted for \$40.3 billion received by all universities in the United States (Council for Aid to Education, 2015). Thus, alumni giving serves as a significant source of income for all colleges and universities. University alumni play an integral role in the future of their alma mater. Alumni promote the university or college to key stakeholders such as prospective students, corporations, foundations, and state and local leaders (Gaier, 2005).

Alumni support has become increasingly important to public institutions in the United States as the level of state funding for higher education decreases. In fiscal year 2013—nationwide—state spending on higher education was 28% less per student than it was in 2008 (Oliff et al., 2013, p. 1). Eleven states have decreased funding for higher education by greater than one-third per student; while, Arizona and New Hampshire have reduced higher education funding by 50% (Oliff et al., 2013, p. 3). State appropriations for higher education have declined in comparison to the rising costs of educating students and the ability of state's government to fund higher education (Weerts & Ronca, 2009). Alumni giving is important to a university because of the rising cost of tuition (Gottfried & Johnson, 2006). Colleges and universities in the United States reported \$41 billion in giving in 2016, a 1.7% increase from the previous year (Council for Aid to Education, 2017). Making alumni giving one of the largest sources of income for universities across the nation. If university development officers have the ability to predict which alumni are most likely to donate to their alma mater based on their age, graduation year, marital status, gender, ethnicity, residential distance from campus, academic satisfaction, perceived institutional need for support, and engagement as students and alumni, the job

of development and fundraising could be streamlined to create an effective and efficiently utilized process.

Demographic Characteristics of Alumni Donors

For decades, researchers (i.e. Bruggink & Siddiqui, 1995; Okunade, Wunnava, & Walsh, 1994; Touré-Tillery & Fishbach, 2017; Wunnava & Lauze, 2001) have searched to define the giving patterns of alumni donors and determine why alumni decided to give back to their alma mater. Clotfelter (2001) observed patterns of alumni giving and determined the top 20% of active donors accounted for 90% of all the gifts received (p. 128). There has been much debate on the reliability and validity with which demographic variables can be used to scientifically predict one's ability to give (Proper & Caboni, 2014). Through research, demographic variables have been identified as either descriptive or predictive indicators of alumni giving. Researched variables include income, age, gender, ethnicity, marital status, graduation year, degrees obtained, proximity to campus, academic satisfaction, undergraduate/alumni participation, perceived need for support, and non-donor alumni. Many of the demographic variables have been found to have a significant effect on alumni giving (Galligan, 2013; Lara & Johnson, 2014; Mesch, Rooney, Steinberg, & Denton, 2006; Sun, Hoffman, & Grady, 2007; Weerts & Ronca, 2007). As state and federal funding for higher education continue to decline, it is important for institutions of higher education to define which of their alumni could be potential donors and at what capacity these potential donors can invest in higher education.

Income. Socio-economic factors can have a strong influence on alumni giving (i.e. employment status, social class, and income). Income has been identified as the

primary determinant on the ability of an alumnus to donate to their alma mater (Belfield & Beney, 2000; Martin, 1993; Monks, 2003; Weerts & Ronca, 2007). A large amount of research has been conducted on socioeconomic variables such as income (Baade & Sundberg, 1996; Clotfelter, 2001, 2003; Dugan, Mullin, & Siegfried, 2000; Meer & Rosen, 2010). Freeland, Spenner, and McCalmon (2015) stated “income and wealth, are among the most consistent predictors of alumni giving” (p. 758). For example, recent graduates and young alumni often lack the financial means to confidently give back without causing a financial burden on themselves due to entry level job salaries and outstanding tuition loans. Increased alumni giving is closely correlated with greater personal wealth and family income (Baade & Sundberg, 1996; Clotfelter, 2003; Monks, 2003; Taylor & Martin, 1995). Alumni in higher income brackets routinely gave greater amounts of money than alumni in the lower income brackets (Marr, Mullin, & Siegfried, 2005). Bruggink and Siddiqui (1995) found income to be a statistically significant variable in predicting alumni giving.

Age. Research has shown age as a demographic variable can predict alumni giving. Specifically, older alumni tend to give greater amounts of money to their alma mater than younger alumni (Clotfelter, 2001; Le Blanc & Rucks, 2009; McDearmon & Shirley, 2009; Monks, 2003). Weerts and Ronca (2007) determined age to be the single most commanding indicator in predicting when an alumni will start giving back to their alma mater. Sun et al. (2007) built on previous research and determined that age was also a factor in the amount of money alumni donate; recognizing that as alumni grew older their donations progressively increased.

The size of a donation varied across age groups. Monks (2003) found that of the young alumni (ages 25-35 years old) who gave back to their alma mater, they gave less than \$200 per year. However, Millennial alumni were more likely to give back to their alma mater than any other nonprofit organization (Goldseker & Moody, 2013). Worth (2002) suggested the earlier an alumni can establish a pattern of giving post-graduation the more likely the alumni are to increase their level of giving as they age and their income increases. Olsen, Smith, and Wunnava (1989) studied the lifecycle of alumni giving and found the growth rate of donations to be related to the age of the alumni with alumni donations declining in frequency and quantity after the age of 52. The probability of giving increases nonlinearly with age, reaching a plateau at 14% increased probability of giving for alumni between the ages of 49-66; there is evidence this might be related to the late-career and or retirement perks (Lara & Johnson, 2014, p. 301).

Williams (2007) investigated the differences existing between the two most influential groups of donors Baby Boomers and mature donors. Baby Boomers were categorized as individuals ranging in age from 53 years old to 71 years old in 2017. Mature donors were categorized as individuals older than 59 years old. Williams (2007) compared Baby Boomers and mature donors to young donors (individuals ranging in age from 18 years old to 39 years old). Young donors were 67% more likely to give to a charity if they had additional information on how the gift would be used. Only 49% of Baby Boomers and 45% of mature donors were likely to give to a charity based on the amount of information given to them about the gift (Williams, 2007, p. 184).

Differences also occur between age groups regarding the source a donor uses to find information about possible gifts. Young donors are three times more likely to use

interactive technology to find information regarding their prospective gift than that of other generations (Moore, 2012, p. 439). Young alumni do not communicate in the same way as older alumni populations, instead preferring to communicate via technically advanced methods such as text messages, emails, and social media. In 2010, a Pew Research Center study observed the use of Internet across generations. The study indicated 95% of Millennials go online for information and current events (Lenhart, Purcell, Smith, & Zickuhr, 2010). Of those online Millennials, 96% utilize email for communication purposes (Pew Research Center, 2010). Millennials also engage in many other online activities such as the use of search engines, watching of videos and movies, social media outlets, medical diagnosis, online shopping, and instant messaging (Pew Research Center, 2010).

Mature alumni rely on printed material and less technically advanced methods. The communication gap between generations makes finding new ways to communicate with younger generations key to future fundraising efforts by development officers (Bhagat, Loeb, & Rovner, 2010). Connecting with young alumni soon after their graduation is key to keeping young alumni engaged which could increase their probability to give back later in life (Catlett, 2010). Engaging alumni with university events at a young age has been shown to increase giving by alumni post-graduation. In 2015, Millennials became the nation's largest living generation (Catlett, 2010). Based on population estimates from the U. S. Census Bureau (2015) Millennials numbered 75.4 million. With the passing of time and Millennials reaching an age where their disposable income rises or increases, Millennials will soon have the largest giving capacity of any other generation in higher education.

Gender. Gender has had mixed findings in predicting alumni giving (Sun et al., 2007). Studies have shown women to be more philanthropic than men despite the higher earnings of most men (Okuande, 1996; Dvorak & Taubman, 2013); while recent studies having controlled for income have revealed no difference of giving based on gender (Clotfelter, 2001; Cunningham & Cochi-Ficano, 2002; Dugan et al., 2000; Marr et al., 2005). Likewise, Clotfelter (2003) found males and females were equally as likely to donate.

Young, Fischer, and Norman (1996) analyzed the background variables that affected the alumni giving of males and females. The effects of whether an individual became a contributing alumnus were not the same for females as it was for males. Lara and Johnson (2014) found the average gift size from males who donated was over \$200 greater than the average gift size from females who donated; though, males gave less frequently than did females (Belfield & Beney, 2000; Holmes, 2009). Yörük's (2010) study focused on single households; it was determined there were significant differences in contribution behavior between males and females. Females were more likely to donate to different areas of charitable activities.

Additional research is needed to statistically define whether women give more than or less than men; as studies have reported mixed results to this question. However, Andreoni, Brown, and Rischall (2003), Belfield and Beney (2000), Mesch, Brown, Moore, and Hayat (2011), and Piper and Schnepf (2008) have established there are significant gender differences in the ways men and women give. Many studies have concluded that women give to charities that have had a profound influence on them personally and they are more likely to extend their generosity across multiple

organizations (Andreoni et al., 2003; Yörük, 2010). Women tend to have greater generosity towards educational based giving opportunities (Einolf, 2011; Mesch, et al., 2011; Piper & Schnepf, 2008). In contrast, men are typically more strategic with their philanthropic giving only contributing to a select number of charities and organizations; mainly lending support to sports and recreational type charities (Andreoni et al., 2003; Mesch, et al., 2011). Although research has provided mixed outcomes on the gender gap in philanthropy; it is not to say there are not distinct differences in giving based on gender.

Race/Ethnicity. There are few research studies dedicated to the holistic examination of alumni giving by ethnic/racial minority graduates of four-year institutions of higher education aside from graduates of Historically Black Colleges and Universities (Drezner, 2009; Freeman & Cohen, 2001; Gasman, 2002; Gasman & Bowman, 2013; Roy-Rasheed, 2013). Due to the lack of research on fundraising across different ethnicities, development officers lack the skillset to engage and cultivate the growing population of minorities (Gasman & Bowman, 2013). However, Bekkers and Wiepking (2011) found that Whites were more likely to give than other racial groups; this is due in part to the long-standing cultivation and solicitation of White alumni from historically White colleges and universities. Engaging alumni of color is an important component of advancing the fundraising efforts at universities and colleges across the United States—as many higher education institutions are no longer predominantly White.

African American Alumni Giving. Since the Civil Rights Act of 1964, colleges and universities in the United States have experienced increased enrollment of African American students at predominantly White institutions. The National Center for

Education Statistics (2012) reported a 240% increase in African American enrollment at major universities across the nation (Gasman & Bowman, 2013, p. 15). With the increase in African American student enrollment, African American alumni are often overlooked by development officers. This oversight of ethnic minorities can be contributed to disparities in income among African Americans and White Americans. Conley (2008) stated, “In 2007, the median White family held assets worth more than 15 times those of the median Black family” (p. 5).

Havens and Schervish (2007) found that African American households give greater amounts of their disposable income to nonprofits than any other ethnicity group. In contrast, African Americans give less to institutions of higher education than any other ethnicity group (Drezner, 2009, 2011; Gasman, 2002, 2010). Nonetheless, research has shown that giving in the African American community is highly associated to the church (Carson, 1993; Gasman, 2002, 2007; Lincoln & Mamiya, 1990). Havens and Schervish (2007) found that African Americans are becoming wealthier and their giving is expected to increase as a result, especially among younger African Americans, those under the age of 40.

Latino American Alumni Giving. The population of Latino Americans is increasing at a rapid pace (Gasman & Bowman, 2013). The increased Latino population leads to increased rates in college enrollment among Latinos— Latinos make up 24% of enrollment at institutions of higher education in the United States (Gasman & Bowman, 2013, p. 45). Making this ethnic group a viable source for future alumni support (Gasman & Bowman, 2013).

According to Ramos (1999) Latinos have historically been viewed as non-donors to institutions of higher education. This is due in part to the low income socioeconomic status of many Latinos in the United States and their lack of disposable income. De la Garza and Lu (1999) noted that while still a form of giving, sending money to family members in need is not viewed as philanthropic giving as they are not directing their funds to a nonprofit organization or a charitable cause. However, De la Garza and Lu (1999) determined that Mexican Americans donated at the same rate as White Americans when controlled for income, education, and immigration status. Ramos (1999) linked the giving trends in Latinos as a cultural issue—as Latinos take pride in their heritage and traditions; they concentrate a majority of their charitable giving to causes that preserve their culture.

Many Latino nations offer education and health care as a public good provided for by governments and churches. Thus, recent immigrants to the United States are not accustomed to the private financial support of higher education. However, the Latino culture is closely tied to the church, like African American communities, most of Latino giving is directed to the church (Hall-Russell & Kasberg, 1997; Wagner & Hall-Russell, 1999). Based on Latino households that frequently donate to a charity, 41% of Latino households give to a religious entity (Center on Philanthropy and Civil Society, 2013).

Asian American Alumni Giving. Asian Americans are one of the fastest growing ethnic groups in the United States—ranking second behind Latino Americans on minority population growth (Gasman & Bowman, 2013; Pew Research Center, 2012). The Pew Research Center (2012) estimated a 134% increase in the Asian population in the next 40 years (Gasman & Bowman, 2013, p. 29). Understanding the philanthropic beliefs of

Asian Americans, could prove beneficial to higher education development offices, as the graduation rate of Asian Americans increases.

Asian American giving is strongly related to personal connections and people-to-people interactions (Tsunoda, 2010). The Asian culture views the personal interactions as a way of developing trust and respect among donors and the organization. Among the Chinese, the personal relationships and connections to individuals are valued more than formal or legal agreements (Geithner, Johnson, & Chen, 2004). According to Chao (1999), Asian Americans take a quid-pro-quo approach to philanthropy—beneficiaries of donations are expected to reciprocate to the donors when asked for a charitable contribution.

Giving patterns among Asian Americans are associated with cultural traditions, religion, and generational support (Gasman & Bowman, 2013). Asian American giving is concentrated on supporting family units and their social circles. As the individual wealth of an Asian American increases so does the size of the person's social circle (Chao, 1999). Remittance from Asian Americans to family members is estimated to be in the billions of dollars, ranking second behind Latino American's annual remittance (Chao, 1999; Pettey, 2002; Yin, 2004).

Outside of Asian American support for family and civil rights initiatives, education is the number one area of support by Asian Americans. However, Asian American giving has the propensity to be private, have a personal connection with the donor, and is often in small amounts; this contrasts with trends in higher education charitable giving where donations are commonly public and large in size (Deeney, 2002; Ho, 2004; Tsunoda, 2010). Asian giving patterns tend to follow Confucian beliefs that

state, “charitable giving should be done quietly so as not to extract personal benefit from altruism” (Tsunoda, 2010, p. 7). Many Asian Americans, especially first-generation immigrants, prefer to support current needs rather than endowments and are not inclined to establish planned gifts (Chao, 1999; Ho, 2004; Pettey, 2002).

According to Lee (1990), Asian Americans view their education as a way to elevate their social status. Many Asian Americans are grateful for the opportunities their education has provided them—this leads to Asian American’s charitable giving to their alma mater is based on their gratitude for their education (Pettey, 2002). The respect and admiration they have for their alma mater inspires their philanthropic support of higher education as both gratefulness and obligatory (Chao, 1999).

Marital Status. Many researchers have investigated the factors surrounding alumni giving as a single individual or as a married couple. Yörük (2010) revealed that higher educated individuals with higher income families were most likely to give to their alma mater. Patterns of giving among married couples are convoluted and are affected by who makes the decision of giving—both spouses decide together or each spouse decides individually to give to charities (Andreoni et al., 2003; Burgoyne, Young, & Walker, 2005). Furthermore, married couples, where the husband made the giving decisions for the pair concentrated their giving to few areas of charitable giving. Whereas, married couples, where the wife made the giving decisions for the pair spent their giving over multiple areas of charitable giving. Households where both spouses decided jointly on charitable giving increased household giving by 7% to charities (Yörük, 2010, p. 509).

Lara and Johnson (2014, p. 301) discovered unmarried alumni were less likely to give by 9%. In contrast, Bruggink and Siddiqui (1995) and Monks (2003) found that single alumni gave greater amounts of money to their alma mater than did married couples. These opposing results might imply that the results are specifically correlated to the individual institutions being studied. The opposed findings of Andreoni et al. (2003, p. 130) found only a slight difference in the charitable giving of men and women; 59.5% of single women give to charity as compared to 57.9% of single men give to charity. Most studies find that women are more philanthropic with their spending than their counterparts; however, the size of the donation between genders varies among research (Einolf, 2011).

Academic College/Major. Okunade et al. (1994) found an individual's college major to be a significant predictor variable for determining if an alumni will be a donor or a non-donor upon graduation. Loveday (2012, p. 87) discovered the college of medicine at the university under study to have an alumni giving rate of 7%, citing there were considerable differences among donors and non-donors when college major was accounted for. Blumenfeld and Sartain (1974), Grill (1988), and Okunade and Berl (1997) revealed college major to be a significant predicting factor when determining donor versus non-donor status of an alumni. Okunade et al. (1994) expanded their research to include monetary amounts of contributions and which college's graduates give larger donations. They discovered business school graduates made larger donations than graduates from other academic colleges.

Year of Graduation. Bristol (1990) quantified the number of years between graduation and an alumni's first gift had a significant effect on the size of the

contribution. Alumni who graduated within the last 10 years were less likely to give than graduates from all other graduation years. Gaier (2005) determined this to be expected by recent graduates because they were yet to acquire the resources needed for giving as compared to those alumni of older graduation classes. Bristol (1990) stated alumni who were approaching the celebration of their 25th graduation anniversary and their 50th graduation anniversary were most likely to give back to their university and give at an increased giving level based on higher numbered reunions. This increased giving was derived from the emphasis placed on giving and participation with the university within an anniversary year and the fact those who received their degree longer ago have received more development related publications and have had more solicitations than those who have graduated in recent years. Recent graduates were the least likely to contribute to alumni giving programs, having reported negative sentiments towards fund solicitations because they had recently given the university a lot of money in the form of tuition. Graduates who were legacies or had multiple generations of graduates from the same institution gave larger gifts and were more likely than single or first-generation graduates to give a donation (Bristol, 1990).

Proximity to Campus. The research has provided mixed outcomes regarding the predictability of alumni giving based on the distance alumni reside from campus. Selig (1999) discovered that alumni who lived near their alma mater were six-times more likely to be alumni donors than those alumni who did not live near their alma mater. Most of the research dedicated to alumni giving based on their location to campus is centralized on individual universities and colleges and does not include multi-institutional comparisons.

Lara and Johnson (2014) found that the average alumni live more than 750 miles from Colorado College. The distance alumni lived from the main campus also had a significant effect on their alumni giving and participation. Holmes (2009) studied 15 years of data on alumni giving to determine which alumni are most likely to give back at Middlebury College. Alumni who reside in wealthy neighborhoods within 250 miles of the college campus “are among the most generous” (Holmes, 2009, p. 26). Holmes (2009) also determined that alumni who had ever attended a class reunion gave 78% more than alumni who did not attend alumni events (Holmes, 2009, p. 26). Beeler (1982) found the distance of an alumni donor’s permanent residence from campus as an indicator of alumni giving status—71% of non-donors lived within a 200-mile radius of the university as compared to 62% of alumni donors living within a 200-mile radius of the university (Beeler, 1982, p. 98). Conner (2005, p. 74) found the closer an alumni lives to the university under study, the more likely they are to give back to their alma mater (34% more likely). Opposing Beeler’s (1982) research and Conner’s (2005) research, Enyard (1993) found there to be no alumni giving predictability as related to the proximity an alumnus lived to the university. A number of the discrepancies among the findings of alumni donors and the proximity to campus may be related to the types of institutions that were studied; i.e. private institutions verses publicly funded universities as private institutions were not considered in Lara and Johnson’s (2014) study. No studies were found to focus on in-state students as alumni verses out-of-state students as alumni.

Academic Satisfaction. Many researchers have studied the influence an alumni’s satisfaction with their academic experience had on their likelihood of giving back to their

alma mater and have found a clear correlation between student satisfaction and alumni giving post-graduation (Baade & Sundberg, 1996; Cabrera, Weerts, & Zulick, 2005; Clotfelter, 2001; Gaier, 2001, 2005; McDearmon & Shirley, 2009; Monks, 2003; Stutler & Calvario, 1996). Gaier (2005) determined the higher the level of one's academic satisfaction, the more likely it would be for the alumni to be involved with their university. Through survey feedback, Gaier (2005) and Monks (2003) concluded that despite demographic variables, the most significant relationship between alumni giving was based on the individuals satisfaction with the academic system as an undergraduate. Ultimately, the greater the satisfaction a graduate had with his or her undergraduate experience, the more likely an alumnus would be to give back financially or participate in university activities (Clotfelter, 2003; McDearmon & Shirley, 2009). Conner (2005), Lawley (2008), Lofton (2005), Thomas (2005), and Ward (2004) have proven that as alumni satisfaction increased, so did the potential of alumni giving and alumni participation.

Conner (2005, p. 77) found alumni satisfaction to be the most significant factor in predicting a donor versus a non-donor with a path coefficient of .35. Through a qualitative analysis, Lawley (2008) observed that non-donors were slightly more likely to submit negative comments pertaining to their alma mater indicating that non-donors had a lesser satisfaction with their alma mater. Lofton (2005) found that commonalities exist between an individual's satisfaction with their educational experiences and their propensity to give back post-graduation. Similarly, Thomas (2005, p. 46) identified alumni who had a high level of satisfaction with their undergraduate college experiences were highly motivated to donate as an alumnus. Unlike other researchers (Conner, 2005;

Lawley, 2008; Lofton, 2005; Thomas, 2005), Ward (2004) focused his research on the academic satisfaction of African American graduates at Historically Black Colleges and Universities and found a positive correlation between the perceived level of satisfaction as an undergraduate and an alumni's probability to give back to their alma mater. Research has proven a significant relationship between academic satisfaction and an individual's propensity to give.

Undergraduate Participation and Alumni Participation. Alumni who participated in at least one formal student activity during their undergraduate experience were more likely to give and more likely to participate in alumni events than those alumni who did not participate in any student activities as undergraduates (Feudo, 2010). Diehl (2007, p. 89) found that as the number of undergraduate extracurricular activities in which a student participates increases, the likelihood of becoming an alumni donor increases by 11.3%. As the number of extracurricular activities in which a student participates increases so does the amount of the donor's post-graduation contributions. Students who actively participated in leadership positions within student organizations, institutional traditions based programs, and campus life are more likely to give back both financially and through volunteer efforts than students who were not involved in leadership development activities as an undergraduate (Bruggink & Siddiqui, 1995; Conner, 2005; Monks, 2003; Steeper, 2009). In contrast, Gaier (2005) found no significant differences in alumni giving based on those who participated in Greek organizations as an undergraduate student and those who did not participate in Greek organizations as an undergraduate student. However, alumni involved in Greek organizations were more likely to participate in alumni activities than those students not

involved in Greek organizations. Extracurricular activities specifically connected to predating alumni giving included student government, intercollegiate athletics, residence life, involvement in student internships, and personal relationships with faculty outside the classroom (Monks, 2003).

Young, et al.'s (1996) research focused on the undergraduate involvement and post-graduate involvement of alumni that could affect alumni giving. Young et al. (1996) focus for undergraduate involvement included only the student's relationship with other students. Post-graduate involvement focused on participation in university alumni events and fraternity and sorority alumni events. Young et al. (1996) observed graduate and post-college activities and experiences that influenced alumni giving by comparing student characteristics at the time the students first entered college as a freshmen, followed by post-college activities and experiences over a 20 year period. Young et al. (1996) indicated that social relationships with other students influenced an individual's participation in alumni events that in turn resulted in the individual becoming a contributor to the university. Thomas (2005) identified that personal experiences while at an undergraduate institution had a significantly positive effect on alumni giving post-graduation. Thomas (2005) found positive personal experiences as an undergraduate validated by alumni giving included serving in a leadership position, career opportunities within their major, satisfaction with their overall college experiences, and the availability of alumni engagement opportunities. Other significant post-college activities that triggered alumni giving involved participation in Greek alumni associations, the level of individual income, and whether the spouse was also a graduate.

Previous studies involving alumni giving predictor variables have identified Greek fraternity and sorority involvement as a contributing factor to the likelihood of an alumni donating to their alma mater post-graduation (Thompson, 2010). Participation in Greek organizations is a predictive variable of future alumni giving as determined by Cockriel and Kellogg (1994); Dean (2007); Durango-Cohen, Torres, and Durango-Cohen (2013); and Thomas and Smart (2005). Thompson (2010) cited membership in a Greek organization is dues based which might insinuate that such organizations appeal to students from wealthy families who are more able to afford the membership dues of the organization. However, Ade, Okunade, Wunnava, and Walsh (1994) concluded that Greek alumni identified directly with the campus chapters of their Greek affiliations after graduation more so than the institution.

Alumni who held leadership positions in an extracurricular activity while an undergraduate “gave more than those who did not” hold a leadership position in an extracurricular activity while an undergraduate student (Clotfelter, 2001, p. 129). Similar to Bingham, Quigley, and Murray (2002), Clotfelter (2001) discovered alumni who had a mentor that led and guided them through their undergraduate career where also more likely to give and more likely to give at a higher level than those students without a mentor. Studies have shown a strong connection between the number of extracurricular activities a student participated in and the prediction of alumni giving.

Perceived Need for Support. Weerts and Ronca (2009) utilized a classification and regression tree methodology to explain characteristics of alumni donors and non-donors at a research-extensive university. Weerts and Ronca’s (2009) study suggested that the levels of giving depended on income, religious background, the degree and venue

in which the alumni kept in contact with the university, alumni beliefs about institutional needs, and the number of institutions competing for alumni gift dollars. Weerts and Ronca (2009) determined the most important factor distinguishing between alumni donors and non-donors were their beliefs about whether the university needed their support. The degree of need for monetary donations is positively related to the likelihood that help will be given (Bekkers & Wiepking, 2011; Levitt & Kornhaber, 1977; Schwartz, 1977). Those alumni who believed that the university did not need support from outside sources were less inclined to become a donor. Alumni gave based on the value or perceived outcome of the additional support and the belief that a gift would help the university achieve a specific outcome (House, 1987; Martin, 1993; McKee, 1975; Miracle, 1977).

Weerts and Ronca (2009) determined that the key differences between donors and non-donors during a lifetime or a single year related to how and to the extent to which an alumni kept in touch with the university. Donors who made a gift to the university at any point in their life were more likely to keep in touch with the university through websites or an online alumni news service. Making alumni communication an important factor in attracting alumni donors.

Religious upbringing played a key role in determining one's giving to his or her alma mater. Ting-Yuan Ho (2006) found membership to a religious congregation had the most effect on alumni giving. Donors who were not at all supportive of religious organizations were least likely to make a gift to the university during their lifetime (Weerts & Ronca, 2009).

Non-Donor Alumni. In contrast to Weerts and Ronca (2009), Wastyn (2009) focused solely on characteristics of non-donors. Wastyn (2009) explored the question of why non-donors do not give to their alma mater. As described by Wastyn (2009), non-donors had many of the same characteristics as those designated by prior research as being most likely to be a donor. Non-donors had positive feelings toward their alma mater, had good college experiences, and remained engaged with the college as alumni. Four major characteristics linked between all non-donors were identified: (a) those alumni unwilling to give back to their alma mater considered college to be a commodity not a charity, (b) they did not believe the college needed their money, (c) they had misperceptions and uncertainties about giving, and (d) they did not make their giving decisions logically. Wastyn (2009) concluded that non-donors believed knowledge was a commodity that colleges sell and students purchase for an agreed upon price; in other words, students paid tuition in exchange for the education a college provided. Thus, recent graduates are less inclined to monetarily support their alma mater; because, they believe their tuition and fees to be their way of giving back. Non-donors evaluated the value they received from their college days at their alma mater to whether the exchanged results were an added value.

Holistic Studies of Donorship. Donors are vital to the growth of a university. To assist development officers in their attempt to cultivate and connect with donors, Bingham et al. (2002) conducted a field experiment to better understand the factors that influenced donors. Data were analyzed to determine which donor acknowledgement programs influenced the size of the gift. Three areas associated with influencing the size of the alumni gift and the probabilities of the alumni giving were identified. The factors

included (a) student alumni characteristics, (b) solicitation programs, and (c) institutional characteristics (Bingham et al., 2002). Bingham et al. (2002) found females and older individuals had a higher probability of giving, married couples were less willing to give than singles, and higher income alumni gave greater amounts. Bingham et al. (2002, p. 9) found a personalized acknowledgment produced an 87.8% increase in an alumni's gift size, the highest among all acknowledgement programs. Bingham et al. (2002) discovered a personalized acknowledgement that included a donor report resulted in an increase in the size of the donation that was larger than the increase in the non-personalized acknowledgement group that also included a donor fund report. The alumni drive fund report illustrated alumni who contributed to the institution's annual fund and grouped those donors by class year and donation level. Overall, Bingham et al. (2002) discovered the acknowledgement program did affect the size of alumni gifts, and evidence suggested that a personalized acknowledgement produced larger increases in gift size than non-personalized acknowledgements. Graduates who received a personalized letter from a faculty member increased their gift by 92.5% (Bingham et al., 2002, p. 10). The changes in the size of the donations were also influenced by the interactions between giving history of the alumni and the acknowledgement programs. Loyal donors who received a personalized acknowledgement from their alma mater increased their donations 83.8% (Bingham et al., 2002, p. 10). Bingham et al. (2002) expressed the importance of communicating with alumni and current students, as to establish a connection or bond that would benefit the university once the alumni reached their individual giving capacity.

In contrast to Bingham et al. (2002), Gottfried and Johnson (2006) evaluated the relationship between alumni solicitations and alumni donations within institutions of higher education. Gottfried and Johnson (2006) found solicitations had a positive and statistically significant effect on the percentage increase in the amount of dollars donated by alumni each year. A 1% increase in alumni solicitations resulted in a 0.2% to 15% increase in alumni donations in a given year (Gottfried & Johnson, 2006, p. 276). Solicitations generated higher alumni donations but also increased numbers of donors. Gottfried and Johnson (2006) concluded that solicitation efforts provided a higher level of alumni support.

Clotfelter (2001) compared attitudinal experiences towards alumni giving and alumni income. Income was the dominate factor that pertained to alumni giving. As income increased, alumni giving increased. Of the alumni who donated the highest dollar amount, 97% reported an annual income greater than \$100,000 (Clotfelter, 2001, p. 132). Among income classes, those who stated they were “very satisfied” with their college education were more likely to donate to their alma mater and at higher levels (Clotfelter, 2001). The top university contributors were more likely to be leaders in a volunteer activity (Clotfelter, 2001). Collectively, the major donors were more likely to have had someone who advised them in college, were more likely to have been satisfied with their undergraduate experience, and were more likely to be satisfied with life in general.

Universities have continued their search for ways to improve the techniques of their advancement staff to better serve potential donors. Improved fundraising techniques have led to increased donor support; thus, further research is being conducted to identify such factors. Proper, Caboni, Hartley, and Willmer (2009) observed institution-specific

factors within the control of the advancement office and that could predict fundraising efficiency and total dollars raised. The age of the institution as compared to other institutions and an alumnus's undergraduate experience both effected the giving probability of alumni; however, both the age of the institution and the undergraduate experience are outside the control of the development office. Older institutions with larger endowments raised more funds than newer, less-endowed institutions independent of any fundraising efforts put forth by advancement officers. A larger student body increased fundraising efficiency, in part because the larger alumni base increased the number of possible donors. Proper et al. (2009) suggested to fundraising practitioners that staff size mattered; larger staffs increased the total dollar amount raised. In summary, the greater the number of development officers, the larger the number of donors contacted.

Summary

Fundraising in higher education and alumni giving have been a vital part of higher education since its inception in the United States. Private giving can reduce an institutions dependency on tuition for operational costs, academic programs, and capital improvements to the campus (Proper et al., 2009). Alumni play an integral role in their relationship with universities from which they receive a degree. Alumni, especially those who have found financial success post-graduation, are actively solicited and cultivated by university development offices with hopes of a financial commitment to their alma mater. These monetary contributions are crucial to the future financial success of many higher education institutions. Across the globe, higher education is viewed as a major factor in economic development (Altbach, 2001). While viewed as the success of economic

development, government funding is failing to support the rapid growth of enrollment in higher education and the increase in the cost of higher education (Altbach, 2001). With the uneven distribution of revenue to higher education, universities and colleges across the United States are forced to seek alternate funding sources. At all stages of the development of higher education in the United States, alumni have served an integral role in the economic development of education. Alumni will continue to serve a financial role for generations to come; thus, it is important to understand the demographic variables that predict alumni giving at a regional comprehensive four-year university in the South.

CHAPTER III

Method

The purpose of this study was to observe specific demographic variables predictive of university alumni financially donating to their alma mater following graduation. In this chapter, the methodology utilized to conduct research supporting this goal will be discussed. This study used a regional comprehensive four-year university in the South's donor database to further advance the existing research that identifies variables to forecast the giving desirability and patterns of alumni. This chapter will include detailed information on: (a) the research question, (b) the proposed research design, (c) the sampling and population selection, (d) the data source, (e) instrumentation, (f) data analysis, and (g) the chapter summary.

The researcher studied the following demographic variables as to whether or not the variables will predict alumni giving: (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) academic college/major, (f) year of graduation, (g) proximity to campus, (h) professional title, (i) level of education, and (j) dual graduate marriages. The predictive capacity of these variables for alumni giving were measured using archival donor information.

Research Question

Higher education has become increasingly dependent on the financial support of their former students. To assist development officers in their role as fundraisers, the following research question was addressed: *What demographic variables predict the probability of alumni making a financial contribution to their alma mater?* The research set forth in this study were quantitative in nature. Results from this study will assist

development officers in focusing on donors who exhibit the demographic variables of those alumni most likely to give back to their alma mater.

Research Design

To address the research question and determine the predicting factors of alumni giving a quantitative quasi-experimental research design utilizing a logistic regression was applied. A quasi-experimental design is not a true experiment because it does not allow for participants to be randomly assigned to a group. Demographic variables were assessed for their probability of predicting alumni giving. Specific demographic variables included *age, gender, race/ethnicity* (i.e., African American, Latino American, Asian American, and White), *marital status, academic college/major, year of graduation, proximity to campus, professional title, the alumni's level of education*. This study was based on archival data received from the official alumni database maintained by the regional comprehensive four-year university in the South that was the focus of this study.

Description of the Sample

Purposeful sampling occurs when the researcher selects specific characteristics of a population of interest and then attempts to locate individuals with those characteristics (Johnson & Christensen, 2017). A purposeful sampling scheme was used to narrow the pool of participants selected to participate in this study (Onwuegbuzie & Leech, 2007). Only individuals who had graduated with a degree from the university under study were included in the sample, this allowed the researcher to narrow the sample of possible participants to 122,212 graduates. Degreed alumni participants were categorized into two groups, donors and non-donors ($n=122,212$). For the purpose of this study, donors who have given monetary support to the university including any giving for academic support,

program support, or athletic support were dummy coded as 1; whereas all non-donors were dummy coded as 0.

After Institutional Review Board (IRB) approval was received, university archival data was acquired from the Office of University Advancement's Raiser's Edge database. This quantitative research study consisted of all degreed alumni associated with the regional comprehensive four-year university in the South that were maintained with in the Office of University Advancement database (N=123,510). For the protection of the identities of the alumni and for the purpose of anonymity in this study, the researcher gave a non-university-related identification number to each entity. The individual identification number was unique to each participant and was unable to be linked to the individuals' name or university information once the non-university-related identification number was generated. All businesses, corporations, foundations and any individuals not considered a degreed alumni or non-degree alumni were excluded from this study.

At the time of the study, the university offered 88 undergraduate degrees, 59 graduate degree programs, and eight doctoral programs with a combined student enrollment of 20,031 across two campuses. The regional comprehensive four-year university in the South had current data on over 172,216 alumni, businesses, and non-degree alumni residing world-wide listed in a database. A sample of alumni donors and alumni non-donors from all seven colleges at the university from all graduation classes will be used for this study.

Instrumentation

Data used for this study was archival data from the university's internal database. Donor records were maintained by university advancement services employees and upon

receipt were updated daily based on donor giving history and donor self-reported inquiries. The archival database used by advancement services was Raiser's Edge, a nonprofit fundraising management software distributed by Blackbaud. The donor records from Raiser's Edge can be downloaded into Excel spreadsheets or SPSS datasets, all applicable for data analysis.

The validity of the biographical information maintained within the Raiser's Edge database lies within the self-reported information given to the institution by the donor (e.g. updated mailing address, *marital status*, *professional title*, and *dual graduate marriage*). It is possible that misinformation or outdated information could be associated with the individual donor records in Raiser's Edge. However, the validity of the institutional academic records maintained in the Raiser's Edge database were based on the enrollment applications and institutional graduation records maintained by the university's Office of the Registrar on each individual student (e.g. *age*, *gender*, *race/ethnicity*, *year of graduation*, and *academic college/major*). A second threat to validity could arise from the lack of university advancement personnel allocated to imputing and updating the high volume of donor records. Limited employees assigned to the upkeep of donor records could lead to higher rates of incorrect input of information into the Raiser's Edge database.

The regional comprehensive four-year university in the South being a public university supported by public funds was subject to the Texas Public Information Act. Meaning, personal donor information can be requested by filing a request in writing for the desired information. Upon authorization from the university's IRB, the researcher requested permission to conduct this study from the Office of University Advancement.

A letter was sent to the Vice President of University Advancement at the university requesting the data set containing the necessary independent variables and dependent variables. A copy of the letter requesting permission to conduct the study can be found in Appendix A. The letter from the Office of University Advancement granting permission for the researcher to conduct the study using the alumni database at the regional comprehensive four-year university in the South can be found in Appendix B.

Variables

The dependent variable for this study were categorical based on alumni who had contributed to their alma mater verses those alumni who had not contributed to their alma mater (e.g. donor or non-donor) as reported by the Office of University Advancement at the regional four-year university in the South. Independent variables used for this study included: (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) academic college/major, (f) year of graduation, (g) proximity to campus, (h) professional title, (i) level of education, and (j) dual graduate marriage. Table 1 outlines the demographic variables analyzed in this research.

Table 1

Independent variables involving demographic variables

Name	Scale	Description
Age	Interval	The age of an alumni donor on February 19, 2018.
Gender	Nominal Categorical	Is the alumni male or female?
Race/ethnicity	Nominal Categorical	What ethnicity is the alumni?
Marital status	Nominal Categorical	Is an alumni listed as married, single, divorced, or widowed?
Academic college/major	Nominal Categorical	What academic college did the alumni graduate from?
Year of graduation	Interval	The number of years post-graduation.
Proximity to campus	Interval	The distance within miles an alumni lives from campus based on their zip code.
Professional title	Nominal Categorical	Whether an alumni has a professional title or military designation.
Level of education	Nominal Categorical	What level of academic degrees were bestowed to the alumni?
Dual graduate marriage	Nominal Categorical	Are both spouses' graduates from the institution under study?

Gender, race/ethnicity, marital status, academic college/major, professional title, level of education, and dual graduate marriage are nominal categorical variables, meaning the value associated with each variable can be assigned membership in one of several possible categories. For *race/ethnicity*, African American, Latino American, Asian American and White alumni were the focus for this study. These four ethnicity groups were selected to mirror many reporting items that are available through the Texas

Higher Education Coordinating Board. At the study institution, each of the racial groups outside of the ethnical focus of this study (i.e. American Indian, Alaskan Native, Native Hawaiian, Pacific Islander, and other/unknown) represented less than 1% of the total student enrollment base of the university in fall 2016 (Texas Higher Education Data, 2015). For comparison, all ethnicities, regardless of percentage of representation were analyzed. *Age*, *year of graduation*, and *proximity to campus* are interval variables, meaning the variables were not limited to a particular value, but rather an equally sized interval scale. *Age* and *year of graduation* were essential predictors as these variables can facilitate the timeframe in which an alumnus is most likely to start giving back to their alma mater upon graduation. The basis of this study was to identify alumni who were most likely to give back to their alma mater regardless of the dollar amount.

Procedures

Before any research was conducted, a request for research approval was submitted to the Institutional Review Board at the university under study. Upon IRB approval of the study, the researcher requested existing alumni donor records from the Office of University Advancement, specifically data pertaining to *age*, *gender*, *race/ethnicity*, *marital status*, *academic college/major*, *year of graduation*, *proximity to campus*, *professional title*, *the alumni's level of education*, and *dual graduate marriage*. Data was masked prior to delivery to the researcher so to protect participant identity. The compiled data was imported into SPSS—a statistical software package specifically for data analysis. To ensure data security, alumni donor information was stored via a password protected external hard drive. Alumni data stored on the external hard drive was destroyed from the hard drive upon the completion of the study.

Data Analysis Plan

Creswell (2012) affirmed quantitative research is fittingly used when one has multiple explanatory variables that can be dichotomized and the researcher is wanting to test the strength of association of the given variables. Quantitative research is a standardized and uniformed field of scientific study that has remained unchanged for centuries. A quantitative research design allows for the systematic process of obtaining quantifiable data as it pertains to alumni donors. Such a research design utilizes numbers and statistics to establish the cause-and-effect of relationships between events and numbers. Quantitative analyses generally only prove or disprove results, which was a benefit to this study, as the researcher determined which alumni were potential donors.

To answer the research question posed in this study, a logistic regression was employed to analyze the dataset. A logistic regression was used to test the predictability independent variables had on dependent variables. Applying a logistic regression analysis will predict the probability of multiple independent demographic variables may have on alumni giving. This research evaluated existing donor data from a regional comprehensive four-year university in the South's Office of University Advancement donor records in an attempt to identify variables that can predict alumni giving. The information gathered by the researcher will be used to assist development officers to better understand their clientele. The donor records were comprised of personal contact information of donors, admissions information, and historical giving information of alumni, businesses, and non-degree alumni. According to Menard (2010), a logistic regression model should include predictor variables that are quantitative, meaning the outcome variables are a member of one group or the other group, but not multiple groups.

Variables can be dummy-coded for the purpose of statistical analysis. Logistic regression utilizes a set of summary statistics to determine overall fit and the nature of the relationship between predictors and group membership (Warner, 2013, p. 1007).

The study tested 10 variables which included (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) academic college/major, (f) year of graduation, (g) proximity to campus, (h) professional title, (i) level of education, and (j) dual graduate marriage. The demographic independent variables used in this study consisted of seven categorical variables and three interval variables. In this study the researcher identified the demographic variables that might predict which alumni are most likely to give back to their alma mater post-graduation. Such a study is ideal for logistic regression. Logistic regression is most often used to study dichotomous dependent variables. However, unlike multiple regression, logistic regression can also be used for categorical independent variables (Menard, 2010).

Upon receiving the requested data set, the information was transferred in to SPSS. Missing data was expected from several independent variables as they were related to individual donor records. This expectation was based on historically self-reported data where individuals omitted biographical information or report false biographical information and institutions later removed data from their files. However, the projected dataset of this study was significantly large, ensuring sufficient population size to contend with missing data. However, the researcher investigated the missingness of data to determine if the level of missingness was problematic or missing in patterns. A large sample size allowed logistic regression to be robust to the missing data sets (Menard,

2010). A logistic regression was chosen to compare the statistical significance of predicting demographic variables to alumni giving.

Logistic regression is used when the dependent variable is categorical—in which case—this study used a binary dependent variable of donor versus non-donor. The logistic regression analysis was used to calculate the probability of alumni being a donor or non-donor resulting in an odds ratio. When using logistic regression analysis, several assumptions apply. The first assumption was that logistic regression does not require a linear relationship between the dependent and independent variables (Menard, 2010). Second, the dependent variable must be dichotomous. Thirdly, homoscedasticity was not essential for the analysis (Lani, 2010). Meaning the variance within each group need not be equal. The forth assumption of logistic regression was independent variables can be ordinal or nominal in scale (Menard, 2010). Another assumption associated with logistic regression was only meaningful variables were included in the analysis (Lani, 2010). Logistic regression assumed all error terms were independent and there is no high multicollinearity among predicting variables (Lani, 2010). Next, logistic regression assumed linearity of independent variables were related to the log odds (Lani, 2010). Lastly, logistic regression required large sample sizes to maximize the likelihood estimates (Menard, 2010).

To validate the assumptions of logistic regression, the researcher first determined if a relationship existed between the independent variables and the dependent variables through a stepwise method. Variables not demonstrating a meaningful fit or strong predictability factor were eliminated as a demographic variable. Once the dataset was fitted to the logistic regression model—the differences between the observed and fitted

values were small and there were no systematic differences to the error structure—a goodness-of-fit was assessed (Archer, Hosmer, & Lemeshow, 2007). The researcher established a goodness-of-fit to assess the fit of logistic regression by using the Hosmer-Lemeshow statistics based on a Pearson chi-square distribution (Hosmer & Lemeshow, 1980).

This study included a non-linear relationship between the independent variable and the dependent variable, dichotomous dependent variables, categorical and interval independent variables, and a large sample size. Because this study attempted to describe the relationship between a binary dependent variable and multiple independent variables, a logistic regression analysis has the least stringent assumptions and allows for a various set of independent variables. Logistic regression was the best statistical method for this research as it can best predict the likelihood of whether an alumni will give back to their alma mater post-graduation or if an alumni will not give back to their alma mater post-graduation.

Summary

This chapter described the method that was used in the research study. The researcher identified demographic variables that are statistically significantly related to the dependent variable of alumni giving at a regional four-year university in the South. A quantitative quasi-experimental design using logistic regression to analyze archival university donor data was used to identify predicting variables. The research question, research design, description of the sample, instrumentation, variables, procedures, and data analysis plan were outlined in this chapter.

CHAPTER IV

Results

Many colleges and universities across the United States are seeking alternative funding solutions to the decreasing financial support from government entities paired with the increasing institutional operating budgets. The most common solution to institutional budget deficits is private giving from alumni and other private donations. Alumni giving is quickly becoming the primary source of supplemental funding for institutions of higher education in the United States (Drezner, 2013). The purpose of this study was to examine a variety of demographic variables to determine whether or not the variables can predict if an alumnus will financially support their alma mater post-graduation via a charitable contribution. Although, this study was isolated to a single, regional, comprehensive four-year university in the South, the results of this study could be informative for other institutions in similar contexts.

A quasi-experimental research design utilizing a logistic regression was applied in this study to determine variables predictive of alumni giving. Specifically, the research examined six variables which included (a) age, (b) gender, (c) race/ethnicity, (d) marital status, (e) year of graduation, and (f) first degree earned at the institution under study as to the predictability of an alumni's post-graduation giving status. This chapter will discuss data results for each of the predictor variables and how they are related to alumni giving status.

Research Question

Higher education has become increasingly dependent on the financial support of their former students to supplement institutional operating budgets. To better assist

development officers in their role as fundraisers, the following research question was addressed: *What demographic variables predict the probability of alumni making a financial contribution to their alma mater?* Identifying demographic variables that are statistically significant predictors of alumni giving is important to the success of higher education fundraising. By categorizing prospects based on alumni giving characters, development officers can more efficiently solicit donations from alumni classified as most likely to make a monetary commitment to their alma mater. Utilizing forward-thinking fundraising techniques to assist in the identification of donor prospects allows institutional advancement teams to better allocate their time and resources to maximize their funding opportunities. Improved effectiveness of fundraising techniques can lead to increased donor support. The findings of this study will provide practical use for university leaders and can lead to new research on a longitudinal basis to determine other characteristics that can predict alumni donor status.

Description of the Sample

This study was conducted at a regional comprehensive four-year university in the South. At the time of the study, the university offered 88 undergraduate degrees, 59 graduate degree programs, and eight doctoral programs with a combined student enrollment of 20,031 across two campuses. A purposeful sampling scheme was taken from all degree receiving alumni from the regional comprehensive four-year university in the South. This sample size included all undergraduate and graduate level degreed alumni ($n=122,212$).

According to Onwuegbuzie and Daniel (2002), variables for which either the standardized skewness coefficient (i.e., skewness coefficient divided by its standard

error) or the standardized kurtosis coefficient (i.e., kurtosis coefficient divided by its standard error), or both, are outside the range of -3.0 to 3.0 suggests departure from normality. An examination of the standardized skewness coefficients and standardized kurtosis coefficients pertaining to age and year of graduation revealed no departure from normality for either variable. Specifically, for age, both the standardized skewness (i.e., skewness divided by the standard error of skewness = 0.351) and standardized kurtosis (i.e., kurtosis divided by the standard error of kurtosis = -0.878) coefficients were within the range of -3.00 and 3.00, thereby constituting no major departure from normality (Onwuegbuzie & Daniel, 2002). Similarly, for year of graduation, both the standardized skewness (1.431) and standardized kurtosis (-1.229) coefficients were within the range of normality, thus validating no major departure from normality.

Data Preparation

Advancement Services within the Office of University Advancement at the university under study provided the researcher with an Excel spreadsheet containing the archival data needed for the study. The spreadsheet contained 12 variables. Upon receiving the dataset, it was determined the proximity to campus could not be determined based on the zip code alone. The proximity to campus was not reported by distance from the main campus, therefore, for the purpose of this exploratory study it was decided to omit the distance variable from the study. However, future studies could examine this variable as Conner (2005) suggested it was predictive of alumni giving. Dual graduate marriages and professional title were also considered as variables for this study. However, neither data constituting dual graduate marriages nor professional title were available from the institution and for that reason, the researcher did not include dual

graduate marriages or professional title as variables in this exploratory study.

Additionally, data pertaining to academic college/major was too vast to analyze in the given timeframe. Logistic regression is susceptible to having one or more subcomponent cells empty. Including the college/major variable in the cell produced multiple empty cells. For the purpose of this exploratory study, the researcher analyzed the predictability of alumni who's first degree received from the institution was an undergraduate degree verses alumni who's first degree received from the institution was a graduate degree. Accordingly, these participants were selected for inclusion in the analyses. There were no missing data among the independent variables as institutional data for all undergraduate alumni who graduated from the regional comprehensive four-year university in the South were examined.

Prior to initiating the statistical analysis for the research question, the variable for age and academic college/major was recoded. The age variable was recoded to reflect the participant's age as of February 19, 2018. Age was originally reported in the dataset as the month, day, and year of the alumni's birthdate. The 29 categories comprising academic colleges and university majors were consolidated and used to separate participants into two groups—individuals who received an undergraduate degree as their first degree from the institution under study and individuals who received a graduate degree as their first degree from the institution under study. This variable was then recoded into a dichotomous category based on the individual's first degree received at the regional, comprehensive four-year university in the South.

Upon finalizing the cleaning of the dataset, the researcher dummy coded the giving of all alumni to make a dichotomous variable. Alumni having given any monetary

donation to the institution under study were coded with a (1) and alumni who had given zero dollars to the institution under study were coded with a (0). Frequencies were then run on all dependent variables to determine any missing values. The largest percentage of missing data among independent variables was related to race/ethnicity. The discrepancy in missing data as related to race/ethnicity was determined to be based on three factors. First, the category of unknown was a viable ethnicity choice; those alumni choosing an unknown ethnicity were uncertain of their ethnical makeup. Secondly, the missing data associated with alumni not reporting their ethnicity either as a purposeful exclusion or as race/ethnicity was not recorded by the university under study. Finally, ethnicity data were not collected by the institution of study prior to 1999. This left a number of years in which no data were available. However, no cells were completely empty.

Data was migrated from the Excel spreadsheet into SPSS. Next, the researcher wrote syntax files to remove all non-degreed alumni from the analysis. Omitting non-degreed alumni from the data source adjusted the sample size to $n=122,212$, from 1933 to 2017. Upon completing these adjustments and preparations, the researcher ran descriptive statistics.

Sample Demographics

The population for the study consisted of 123,510 ($N=123,510$) alumni from a regional comprehensive four-year university in the South. All alumni not receiving a degree from the institution under study were eliminated from the study, leaving a sample size of 122,212 ($n=122,212$). Demographic characteristics of the sample included age, gender, and ethnicity. As outlined in Table 2, the age of the population ranged from 20

years old to 106 years old, with an average of 48 years ($SD=16.98$ years). Data on age showed 37.9% of alumni were under the age of 40 years old; 33.6% of the alumni were between the ages of 40 years old and 59 years old; and 31.1% of the alumni were over the age of 60 years old. The youngest alumni giving back to their alma mater was 20 years old and the oldest alumni giving back to their alma mater was 106 years old. Missing data for the independent variable age was less than 1% and caused no anomalies for this analysis. Data analysis determined the average age of alumni donors is 48 years old and the mode age of alumni donors is 31 years old.

Table 2

Descriptive statistics for age

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Min	Max
Age in years	122,212	48.16	16.98	20	106

Frequency reports were generated to determine that of the 122,212 alumni, 55.9% were female and 44.1% were male. Data on ethnicity showed 58.1% of alumni to be white non-Hispanic; 7.8% of the alumni were Hispanic; 7.7% of the alumni were Black; 2.7% of the alumni were of unknown ethnicity; 1.5% of the alumni were Asian/Pacific Islander; and less than 1% of alumni were categorized as American Indian. Missing data accounted for 21.7% of alumni having not reported their ethnicity. Table 3 illustrates the descriptive statistics of these demographic variables. The non-reported ethnicity created a limitation in data which was a healthy amount of missing data. This was explained by the fact ethnicity and race were not maintained by the institution until 1999 year or by students not providing these data on their admissions application. Therefore, data pertaining to Ethnicity should be interpreted with a healthy degree of caution.

Table 3

Demographic characteristics of the population

Variable	Characteristic	Frequency	Percentage
Gender	Male	54,437	44.1
	Female	69,068	55.9
Race/ethnicity	American Indian	679	0.5
	Asian/Pacific Islander	1,831	1.5
	Black	9,482	7.7
	Hispanic	9,617	7.8
	Unknown	3,283	2.7
	White	71,817	58.1
	Not reported	26,801	21.7

Additional personal characteristics of the alumni at the regional comprehensive four-year university in the South included marital status, level of education, and year of graduation. The marital status of alumni showed 55.9% of alumni were single; 40.3% of alumni were married; 2.3% of alumni were divorced; 1.5% of alumni were widowed; and 0.1% had a life partner. The level of education as it pertained to alumni receiving their undergraduate degree at the university under study equated to 81.1% of alumni's first degree was an undergraduate degree at the university under study. The remaining 18.9% of graduates received a graduate degree as their first degree. Data on class year showed 6.1% of mature donors graduated before 1968. Baby Boomers who graduated from the university under study between 1968 and 1986 represented 24.5% of the alumni population. Generation X alumni whom graduated from the institution under study between 1987 and 2001 accounted for 24.2% of the alumni population. The largest alumni donor base was composed of Millennials those alumni who have graduated from the university under study since 2002 making up 45% of the alumni population. Table 4 depicts an illustration of the personal characteristics of the population.

Table 4

Personal characteristics of the population

Variable	Characteristic	Frequency	Percentage
Marital Status	Divorced	2,883	2.3
	Life partner	66	0.1
	Married	49,718	40.3
	Single	69,009	55.9
	Widowed	1,833	1.5
First degree earned at the institution under study	Undergraduate degree	100,166	81.1
	Graduate degree	23,299	18.9
Year of graduation	Pre- 1968		6.1
	1968-1986		24.5
	1987-2001		24.2
	Post 2002		45.0

Data Frequencies

Data provide by the Office of University Advancement provided copious information for the quantitative method used to explain the research question. SPSS was used to perform statistical analysis on the alumni dataset. Data was exclusive of all degree receiving alumni from the university under study. A frequency report for the dependent variable reported approximately 77.6% of alumni had not financially supported their alma mater (non-donor); whereas, approximately 22.4% financially supported their alma mater (donor).

Findings

A logistic regression analysis was conducted to predict alumni giving of 122,212 degreed alumni using demographic variables as predictors. Independent variables were entered sequentially in blocks used to predict alumni giving. Of the six independent variables in the model, two (age and race/ethnicity) were statistically significant predictors of alumni giving. These variables accounted for 77.5% of the variance

associated with alumni giving, meaning that the variables explain 27.5% more variance than would otherwise be explained by chance. The independent variable of age was a significant predictor of alumni giving by graduates of the regional comprehensive four-year university in the South. *Nagelkerke's R²* of 0.024 indicated a predictable relationship between age and giving. Age accounts for approximately 2.4% of the predictability of one's giving. Through additional post hoc analyses, age was combined with gender to determine the predictability of alumni giving through any interaction effects. However, there was no change in the *Nagelkerke's R²*; thus, neither gender nor the interaction of age and gender were significant predictors of alumni giving. Results of the binary logistic regression indicated that there was a significant association between age and alumni giving ($\chi^2(3) = 28.15, p < .001$). For every one-unit change in age, the log odds of alumni giving are expected to increase 1.6%. This influence, though statistically significant, is extremely small and should be interpreted with caution.

Ethnicity was also a statistically significant predictor of alumni giving. *Nagelkerke's R²* of 0.025 indicated ethnicity when interacting with accurately predicted 2.5% of alumni giving. Ethnicity equated to 0.1% of the reason someone donates to their alma mater using this model. Research on higher education fundraising across different ethnicities is limited. However, Bekkers and Wiepking (2011) found that Whites were more likely to give than other racial groups; this is due in part to the long-standing cultivation and solicitation of White alumni from historically White colleges and universities. Results of the binary logistic regression indicated that there was a significant association between ethnicity and alumni giving ($\chi^2(9) = 107.7, p < .001$). For every unit change in ethnicity, the odds of alumni giving are expected, on average, to increase 1.0%.

Like the findings related to age, the influence of ethnicity is extremely small. Since different ethnicities were arbitrarily coded into numerical categories a unit increase is illogical. Therefore, ethnicity statistics are offered in Table 5.

Table 5

Race/ethnicity descriptive statistics

Variables	Model 1		
	<i>B</i>	Std. Error	Exp(<i>B</i>)
Constant	22.771	15209.53	.275
Age (years of age)	.002	.001	.016
Race/ethnicity	.001	.001	.010
Not reported	.010	.010	.001
American Indian	.030	.023	.031
Asian/Pacific	.155	.100	.016
Islander			
Black	-.189	.070	.007
Hispanic	.081	.029	.006
Unknown	.161	.028	.000
White, non-Hispanic	.199	.050	.010
Age*Ethnicity	.001	.010	.001

Age, gender, ethnicity, and marital status, when combined, increases the variance that explained why someone is an alumni donor. *Nagelkerke's R²* of 0.071 for age, gender, ethnicity, and marital status predicted 7.1% of alumni giving. This is a 2% increase in variance among independent variables. However, the statistical analysis had a significance level of less than 0.001 in the Hosmer and Lemeshow Test. This test confirmed that marital status was not a good fit for the model of statistical analysis for prediction. Thus, marital status is not a reasonable predictor of alumni giving.

Alumni receiving a bachelor's degree from the institution under study had no change on the *Nagelkerke's R²* value of combined predictability of alumni giving.

Neither, the independent variables, graduation year and graduate verses undergraduate

degrees proved to be a significant predictor of alumni giving. Thus, the model used in this study showed age and ethnicity to be significant predictors of alumni giving.

The logistic regression model is interpreted through the odds ratios. The odds ratios explained the effect of the independent variables on the dependent variables in regard to predictability. Odds ratios are compared on a 1.0 scale. Odds ratios below 1.0 represent a negative effect where odds ratios above 1.0 represent a positive effect. For the general model, including age and ethnicity as predictors of alumni giving, for every unit increase in these variables alumni giving is anticipated to increase by a small percentage of 2.5%.

Summary

Chapter IV presented the findings of data collected from a regional comprehensive four-year university in the South. As previously stated, to test the predictability of alumni giving based on demographic variables, the researcher used logistic regression to determine the likelihood of specific variables that could predict alumni giving to one's alma mater. The research question was addressed by finding that age and race/ethnicity were predictive of alumni giving. This study found that in the model used, age is the significant driving factor behind whether or not an alum will give back to their alma mater upon graduation. The age of an alum explained 2.4% of the reason an alum was a donor to the university under study. Ethnicity was also a predictor; however, it explained less than 0.01% of the predicting factors. Analysis of other demographic variables showed little to no significance in predicting alumni giving at the regional comprehensive four-year university in the South.

The findings of this study indicated there are demographic variables that can predict the probability of alumni making a financial contribution to their alma mater post-graduation. The independent variables age and race/ethnicity were found to have moderate predictability of alumni donors. The findings from this research study will benefit the development professionals at the institution under study and provide needed information on the institution's constituent base. A summary of the findings, implications for practice, and recommendations for future research will be discussed in Chapter V.

CHAPTER V

Summary, Implications, and Recommendations

Chapter I provided an introduction to alumni giving and outlined the basis of this study. A review of the literature as it pertained to alumni giving was presented in Chapter II. The methodology of the research was detailed in Chapter III and included the research method, population of the study, and the method of data collection. Chapter IV discussed the major findings from this study. Based on the findings in the previous chapter, Chapter V will summarize data findings and discuss implications pertaining to the findings of this study. Furthermore, recommendations for future research studies on higher education fundraising are also presented in this chapter. This study identified demographic variables suggestive of predicting alumni giving. The ability to categorize alumni into groups of most likely to donate can enhance the effectiveness of development professionals in identifying alumni and donor prospects to solicit.

The purpose of this quantitative study was to determine if a variety of demographic variables could predict whether or not alumni will financially support their alma mater upon graduation. This study explored predicting factors of alumni giving at a regional comprehensive four-year university in the South. Understanding the predicting factors of private giving from alumni will assist development officers effectively increase alumni giving. The issue of alumni giving is particularly important to institutions of higher education as state appropriations for higher education are lessening. Decreased state funding combined with the increased cost of educating students and the economic impact on university endowment revenue has created financial shortfalls at the university level. To overcome these financial budget declines, universities across the United States

are looking to supplement their income through the financial support of their alumni. The ability to recognize the characteristics of those alumni most willing to give back to their alma mater can assist development professionals in identifying alumni to successfully solicit for university fundraising initiatives.

Discussion and Interpretation of Findings

As the literature review outlined, government funding of higher education is declining. The continued financial success of universities and colleges across the United States has become dependent on supplemental revenues. Budget cuts for higher education have made it necessary for university leaders to solicit alumni for financial commitments to supplement the institution's financial deficit. Resource dependency theory focuses on an institution's ability to acquire needed resources (i.e. financial resources, human resources, and other intangible resources) for the benefit of the organization (Drezner & Huehls, 2014). Colleges and universities are interdependent and must cultivate relationships with alumni and other entities to acquire the needed resources. The resource dependency theory explained the need for soliciting alumni donors through higher education fundraising initiatives. Additionally, resource dependency theory supports the importance of predictive modeling to assist development professionals in identifying alumni who are most likely to become an alumni donor.

Through this analysis, the researcher identified demographic predictor variables of alumni giving through logistic regression modeling. The demographic variables analyzed in this study were obtained from the Office of University Advancement at the regional comprehensive four-year university in the South under study. Data obtained from the institution contained 123,510 alumni records of those alumni records it was

determined 122,212 alumni earned a degree from the institution under study. The demographic variables chosen for this study were determined by the availability of data provided by the Office of University Advancement at the institution under study.

Among the six variables analyzed in this study, two demographic variables were statistically significant predictors of alumni giving. Variables most predictive of alumni giving were age and race/ethnicity. Based on the results of this model, age is the most significant predictor of alumni giving at the institution under study. These results are consistent with previous literature on the predictability of alumni giving associated with the age and the race/ethnicity of the constituent (Bekkers & Wiepking, 2011; Clotfelter, 2001; Le Blanc & Rucks, 2009; McDearmon & Shirley, 2009; Monks, 2003; Sun et al., 2007; Weerts & Ronca, 2007).

Previous research has shown the demographic variable age can predict alumni giving. Specifically, Weerts and Ronca (2007), determined age to be the single most commanding indicator in predicting when alumni will start giving back to their alma mater. Mature alumni tend to give greater amounts of money to their alma mater than younger alumni (Clotfelter, 2001; Le Blanc & Rucks, 2009; McDearmon & Shirley, 2009; Monks, 2003). Sun et al. (2007) expanded upon previous research and determined that age was also a factor in the amount of money alumni donate; acknowledging that as alumni grew older their donations progressively increased. In summary, the demographic variable age analyzed in this study was congruent with prior research.

Race/ethnicity accounted for 0.1% of the reason someone donated back to their alma mater post-graduation. In this study, 58.1% of alumni reported white non-Hispanic as their race/ethnicity. Comparable to Bekkers and Wiepking's (2011) research, Whites

were more likely to give than other racial groups; due in part to the solicitation of White alumni from historically White colleges and universities. The findings in this study are aligned with previous research as African American, multi-racial, and non-United States citizens donate significantly less to their alma mater than other race/ethnicity groups (Monks, 2003). Due to the lack of research on donor predictability across different ethnicities, development officers lack the skillset to engage and cultivate the growing population of minorities (Gasman & Bowman, 2013).

Using this model, the predictability of alumni giving associated with the independent variable of age was a significant predictor of alumni giving by graduates from the regional comprehensive four-year university in the South. Age accounts for approximately 2.4% of the variability in one's likelihood of giving. This predictive model also signified the variable race/ethnicity to be a significant indicator of donor or non-donor status at the institution under study. Race/ethnicity accounted for 0.1% of the reason someone donated back to their alma mater post-graduation. The predictor variables age and race/ethnicity align with the social identification theory in relation to higher education signifying alumni can be categorized into groups based on age and race to increase predictability of alumni giving at the institution under study.

While the results of this study are statistically significant predictors of alumni giving at the institution under study, it is not enough to be practically significant in a broad sense. Age as a demographic variable can predict alumni giving. Specifically, the majority of alumni who had given to the institution under study were mature alumni. Meaning they were older than 49 years old. Although, race/ethnicity was only a moderate influencer of alumni giving in this study, current literature focused on alumni

giving suggest race/ethnicity to be a viable factor in identifying donor prospects. It is important for development professionals at the university under study to know the characteristics of their donor base and how it parallels to donor bases at comparable institutions. The demographics of higher education are evolving with the changing demographics of the society we live in. To successfully create a comprehensive fundraising strategy that identifies alumni most likely to give back to their alma mater post-graduation, development professionals must understand giving characteristics of their alumni and future giving trends of their alumni. Knowing the characteristics of an institution's alumni base creates an opportunity for development staff to engage a newly identified prospective donors.

Social identification theory explains how individuals relate to groups based on their own unique characteristics and relevant group classifications (Tajfel, 1978; Tajfel & Turner, 1985; Turner & Oakes, 1986). Higher education fundraisers are accustomed to social identification theory as a means of connecting and engaging alumni with their alma mater. Mann (2007) stated “organized fundraising efforts around such events as reunions, college anniversaries, and campaign goals” (p. 38); all examples of social events development staff orchestrate to enhance their fundraising efforts among social groups. Social identification theory allows for groups to be viewed in terms of group characteristics while overlooking individual traits which define their individuality. Social identification theory facilitates the association between the variable age and alumni giving to be validated within this study. Using the conceptual framework social identification theory, development staff should focus fundraising efforts on events that connect alumni within similar demographic circles (e.g. class reunion celebrations and

student organization reunions). A person's social identity can provide a framework for how categorical groups can increase alumni giving and ultimately predict which alumni groups are most likely to give back to their alma mater. Creating social opportunities for alumni to engage and reconnect through their positive college experiences can allow fundraisers to focus on groups of donors who are categorized into social groups most likely to donate. According to Mael and Ashforth (1992) alumni groupings of similar or same characteristics could influence alumni giving from non-donors in the groupings. Using social categorization to group alumni into groups based on gender, age, marital status, ethnicity, and graduation year provides a way of organizing socially relevant information to facilitate in the process of both understanding and predicting behavior of alumni giving (Ellemers & Haslam, 2011).

The predictive variables revealed in this research serve as a guide for development professionals. Age and ethnicity do not guarantee an individual will give back to their alma mater post-graduation. They explain, collectively, 2.5% of the total variance in alumni giving. Despite only a moderate influence, the demographic variables age and ethnicity can help to narrow the alumni list of constituents most likely to make a financial contribution to the institution. Ultimately, those categorized as most likely to be an alumni donor could perhaps never financial support their alma mater. In the end, philanthropic giving is based on one's desire to make a difference (Duncan, 2004). The pure altruism model is based on an individual's motive to give back through charitable giving and the desire that donors want to help others through a sense of connectedness (Piliavin & Charng, 1990). Donors may decide to make a financial commitment based on motivating reasons such as the financial need of the institution, a feeling of reciprocity to

their alma mater, satisfaction of their own college experience, or the financial needs of students. In the end, it is the alum's relationship with their alma mater and their desire to want to help others that will eventually lead to their status as a donor or non-donor. Age and ethnicity are merely suggestive of patterns in data on alumni giving and may be used, with precaution, in donation seeking efforts.

Collectively, resource dependency theory, altruism theory, and social identification theory explained the why additional resources are needed, the who will mostly likely provide additional resources, and the how alumni relationships with their alma mater can impact donor status. The focus of this study was to determine who is most likely to be an alumni donor based on predictive variables utilizing the social identification theory. However, the who to target for financial contributions is most beneficial when the why we need financial contributions is explained through resource dependency theory. Thus, the why we need financial contributions cannot be explained without knowing how alumni relationships effect donor status and who will financially support the institution.

Without additional financial resources, institutions of higher education are unable to provide gratifying educational experiences to their students. An unsatisfactory educational experience with one's alma mater can threaten the future relationship with the institution. Unsatisfactory educational experiences at one's alma mater can impeded on one's decision to make a monetary donation to their alma mater post-graduation. Thus, the who, why, and how of predictor variables are important to the overall success of alumni giving. For these reasons, resource dependency theory, pure altruism model, and social identification theory were chosen to guide this study. Thus, it is beneficial for

colleges and universities to solicit quantifiable alumni to provided necessary income to establish quality educational experiences for current students; as current students will soon be alumni thus bringing the process full circle.

Implications

With an ever-changing economy, the decrease in government funded academic programs, and the cost of higher education increasing the need for private funds to support higher education is on the raise. Since 2014, private funding for higher education has increased by 7.6%; in 2016, private donations made to colleges and universities across the country totaled more than \$41 billion (Council for Aid to Education, 2016). This phenomenon demonstrates that alumni giving is key to a university's financial success. The research outlined in this study can be used to improve the success of university advancement as a whole including development professionals, alumni relations, marketing and communications, and advancement services.

The increased need for private funding of higher education affirms the need for a greater understanding of predictive variables that can be used by development professionals to identify the most likely alumni for solicitation of a charitable contribution. Focusing development efforts on quantifiable prospects can add efficiency and effectiveness to the overall fundraising initiatives of the institution. It is important for development officers and fundraising professionals to know their constituent population. This model suggests a strategic approach to donor identification resulting in increased success of solicitations.

Specifically, engaging alumni of color can be an important component for the advancement of higher education fundraising efforts by development professionals—as

the demographics of higher education institutions are rapidly shifting away from predominantly White institutions of higher education. Researchers have found that African American households give greater amounts of their disposable income to nonprofits than any other ethnicity group (Havens & Schervish, 2007). However, African Americans give less to higher education than any other ethnicity group (Drezner, 2009, 2011; Gasman, 2002, 2010). Havens and Schervish (2007) found that the wealth of African Americans is increasing and their philanthropic giving is expected to increase as a result, especially among young African Americans under the age of 40. The prediction of increased wealth among young African American donors signals an opportunity for fundraising professionals to engage a new demographic of alumni donors.

Alumni relations officials can utilize this model to create alumni clubs or facilitate alumni events based on age and ethnicity to engage alumni and encourage university involvement post-graduation. Marketing and communications professionals within higher education can provide strategic marketing campaigns focused on alumni based on their age. The age of the donor also helps determine the marketing avenue most appropriate for the age group. This model created an opportunity for advancement services professionals to understand the importance of accurate record keeping and data collection of alumni post-graduation. This research also demonstrates the power of knowledge. The more information an institution can accumulate on an alumni, the greater the likelihood of predicting one's ability to give back to their alma mater. Institutions of higher education must actively research and identify alumni with the highest probability of giving to provide the necessary supplemental funding for their institution.

The ability to predict alumni most likely to be a donor allows for strategic development practices which can save time and valuable resources. The academic environment among institutions of higher education may differ; but, the demographic makeup of the student population and alumni base are similar across all spectrums of higher education. Utilizing predictive modeling to identify alumni who are most likely to give back to their alma mater post-graduation can drastically reduce the 100,000 alumni within the database to a manageable alumni list of prospects. This model describes the odds of general patterns on alumni giving based on age, each ethnicity, and the combination of age and ethnicity. This should not be considered a hard and fast expectation for each variable, but this model may describe general patterns in giving at the institution under study. This model, if implemented at other institutions might hold true; however a thorough analysis would need to be presented to determine the generalizability. This model suggests a strategic approach to donor identification resulting in increased success of solicitations among development officers. Identifying alumni most likely to contribute financially to their alma mater will allow development professionals to create strategic approaches to their fundraising efforts. This model also allows for a manageable list of alumni with a high probability of giving. Condensing the alumni donor base to a manageable list of prospects adds efficiency and effectiveness to fundraising efforts.

Recommendations for Further Research

The results presented in this research study explored predictive characteristics that can identify alumni most likely to give back to their alma mater post-graduation at a single institution of higher education. With the advancement of technology and the

availability of the internet, recommendations for future research at the institution under study could include online contributions. Identifying how the internet has enhanced alumni giving and how mature donors have adapted to online giving. Qualitative research on why donors give could improve upon predictive patterns among alumni donors and determine what motivates alumni donors to make a charitable contribution to their alma mater post-graduation. Specifically, quantitatively analyzing nontraditional donors (i.e. alumni of color, female alumni, young alumni, non-giving alumni) will allow development staff to have a better understanding of what motives them to make charitable contributions; ultimately, leading to a new set of donor prospect to engage in their fundraising efforts.

The National Center for Education Statistics (2012) reported a 240% increase in African American enrollment at major universities across the nation (Gasman & Bowman, 2013, p. 15). With the increase in African American student enrollment, research on minority alumni giving could provide a new set of donor prospects. Additional research on minority alumni giving should be conducted at HBCU, private universities, state colleges and universities to determine giving trends across the different types of universities. Comparison studies between alumni giving at HBCU's and state funded institutions can also provide opportunities for both types of institutions. Research on minority giving to determine if there is a difference in giving between minority groups or if there are trends in minority giving across the different spectrums of colleges and universities.

This study could be expanded to include multiple institutions allowing for a broader more sophisticated interpretation of the demographic variables that predict

alumni giving. Much of the research previously conducted on alumni giving analyzed data from individual institutions of higher education. The lack of multi-institutional research on alumni giving and higher education fundraising is due in part to the confidentiality of alumni financial records and alumni giving history. The privacy and confidentiality policies enacted by institutions of higher education make it difficult for researchers to obtain the needed data to compare results across multiple institutions of higher education. Ideally, professional organizations should develop a research agenda that promotes a consortium of schools to partner and examine donor profiles from a holistic perspective. Thus, multi-institutional research studies can enhance and strengthen the results of predictive modeling.

In addition, research previously conducted on alumni giving has had contradicting results and there has been much debate on the reliability and validity with which demographic variables can be used to scientifically predict one's ability to give (Proper & Caboni, 2014). For example, Dvorak and Taubman (2013) found women to be more philanthropic than men despite the higher earnings of most men. However, several studies focusing on gender philanthropy which controlled for income revealed no difference of giving based on specific gender (Clotfelter, 2001; Cunningham & Cochran, 2002; Dugan et al., 2000; Marr et al., 2005). Dissimilarly, Clotfelter (2003), found males and females were equivalent in their likelihood of giving. Likewise, regarding the marital status of alumni donors, Lara and Johnson (2014, p. 301) discovered unmarried alumni were less likely to give by 9%. In contrast, Bruggink and Siddiqui (1995) and Monks (2003) found that single alumni gave greater amounts of money to their alma mater than did married couples. Similarly, proximity to campus has

provided mixed outcomes regarding the predictability of alumni giving based on the distance alumni reside from campus. Again, most of the research dedicated to alumni giving based on their location to campus is centralized on individual universities and colleges and does not include multi-institutional comparisons.

These contradicting facts predicting alumni giving status could be credited to the bulk of the research being conducted at individual institutions rather than a cross section of similar institutions. Just as Worth (1993) suggested that age, gender, and marital status are not significant indicators of alumni giving, this research was challenged by Brittingham and Pezzullo (1990) whom suggest age, gender, and marital status can have a significant effect on alumni giving. Expanding the research to include multiple institutions could help validate the contradicting results of predictive variables.

Research has been done on alumni giving, specifically through doctoral dissertations, yet few have been published (Proper et al., 2009; Proper & Caboni, 2014; Kelly, 2002). In the last 25 years, the amount of research surrounding university advancement has drastically increased (Proper & Caboni, 2014). There has been an extensive amount of research done on the discipline of fundraising due in part by the influx of development officers in higher education and their need to find ways to better relate to donors and inspire them to give back to their university.

As the area of research on alumni fundraising increases and becomes abundant in breadth, new issues arise as society and giving trends change with each generation. Additional research is needed involving online giving, fundraising in economic recessions, alumni giving from nontraditional donors, and fundraising among the generations; specifically, research encompassing multi-institutional studies. As time

passes and the number of college educated citizens of society increase the need for further research will continue to evolve.

Summary

The purpose of this study was to determine demographic variables that would predict alumni giving at a regional comprehensive four-year university in the South. In an ever-changing economy with declining financial resources to fund higher education, predictive modeling can provide colleges and universities with quantitative data that can accurately and efficiently identify alumni who are most willing to give back to their alma mater upon graduation. Alumni giving has become the primary source of supplemental revenues for institutions of higher education. Without private funding from external sources to offset the financial shortcomings of institutions the quality of a higher education could be hindered. Decreased revenues for colleges and universities means sacrificing student services, educational quality, and overall educational experiences.

Research on predictive modeling as it relates to identifying viable alumni donors is crucial to the success of higher education fundraising. The ability to identify characteristics of likely donors using statistical models is advantageous to development officers. Utilizing predictive modeling establishes prioritized registers of donor prospects; thus, allowing fundraising professionals to purposefully solicit constituents with the highest probability of being an alumni donor.

REFERENCES

- Ade, A., Okunade, P., Wunnava, V., & Walsh, Jr., R. (1994). Charitable giving of alumni: Micro-data evidence from a large public university. *American Journal of Economics and Sociology*, 53, 73-84.
- Altbach, P. G. (2001). The American academic model in comparative perspective. In P. Altbach, P. Gumport, & D. Bruce (Eds.), *In defense of American higher education* (pp. 11-37). Baltimore, MD: The Johns Hopkins University Press.
- Altbach, P. G., Berdahl, R. O., & Gumport, P. J. (2005). *American higher education in the twenty-first century* (2nd ed.). Baltimore, MD: John Hopkins University Press.
- Andreoni, J. (1989). Giving with impure altruism: Applications to charity and ricardian equivalence. *Journal of Political Economics*, 97, 1447-1458.
- Andreoni, J., Brown, E., & Rischall, I. (2003). Charitable giving by married couples: Who decides and why does it matter? *Journal of Human Resources*, 38, 111-133.
- Archer, K. J., Lemeshow, S., & Hosmer, D. W. (2007). Goodness-of-fit tests for logistic regression models when data are collected using a complex sampling design. *Computational Statistics & Data Analysis*, 51(9), 4450-4464.
- Baade, R. A., & Sundberg, J. O. (1996). What determines alumni generosity? *Economics of Education Review*, 15, 75-81.
- Barrow, C. W. (2010). The rationality crisis in US higher education. *New Political Science*, 32, 317-344. doi:10.1080/07393148.2010.498197
- Beeler, K. J. (1982). *A study of predictors of alumni philanthropy in private universities* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (303223933)

- Bekkers R., & Wiepking, P. (2011). A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. *Nonprofit and Voluntary Sector Quarterly*, 40, 924-973. doi:10.1177/0899764010380927
- Belfield, C. R., & Beney, A. P. (2000). What determines alumni generosity? Evidence from the UK. *Educational Economics*, 8(1), 65-81.
- Bhagat, V., Loeb, P., & Rovner, M. (2010). The next generation of American giving. Retrieved from: http://www.afpnet.org/files/contentdocuments/fafpinformationexchange_nextgenwhitepaper_convio.pdf
- Bingham, F. G., Quigley, C. J., & Murray, K. B. (2002). An investigation of the influence acknowledgement programs have on alumni giving behavior: Implications for marketing strategy. *Journal of Marketing for Higher Education*, 12(2), 1-14. doi:10.1300/J050v12n02_01
- Blumenfeld, W. S., & Sartain, P. L. (1974). Predicting alumni financial donation. *Journal of Applied Psychology*, 59, 522-523.
- Bong, M., & Clark, R. E. (1999). Comparison between self-concept and self-efficacy in academic motivation research. *Educational Psychologist*, 34, 139-153.
- Bristol, R. B. (1990). The life cycle of alumni donations. *The Review of Higher Education*, 13, 503-518.
- Brittingham, B. E., & Pezzullo, T. R. (1990). *The campus green: Fund raising in higher education. ASHE-ERIC higher education report 1*. Washington, DC: George Washington University.
- Brown, M. C., & Davis, J. E. (2001). The historically black college as social contract, social capital, and social equalizer. *Peabody Journal of Education*, 76(1), 31-49.

- Bruce, J. (2003). Vanderbilt law school in the nineteenth century: Its creation and formative years. *Vanderbilt Law Review*, 56, 497-560.
- Bruggink, T. H., & Siddiqui, K. (1995). An econometric model of alumni giving: A case study for a liberal arts college. *The American Economist*, 2, 53-60.
doi:10.2307/25604040
- Burgoyne, C. B., Young, B., & Walker, C. M. (2005). Deciding to give to charity: A focus group study in the context of the household economy. *Journal of Community & Applied Social Psychology*, 15, 383-405.
- Byrne, B. M., & Gavin, D. A. W. (1996). The Shavelson model revisited: Testing for the structure of academic self-concept across pre-, early, and late adolescents. *Journal of Educational Psychology*, 88, 215–228. doi:10.1037/0022-0663.88.2.215
- Cabrera, A. F., Weerts, D. J., & Zulick, B. J. (2005). Making an impact with alumni surveys. *New Directions for Institutional Research*, 126 (Summer, 2005), 5-17.
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental designs for research*. Stokie, IL: Rand McNally.
- Carson, E. D. (1993). On race, gender, culture, and research on the voluntary sector. *Nonprofit Management and Leadership*, 3, 327-335.
- Cash, S. G. (2000). *Private, voluntary support of public research universities in the united states: 1785-1958*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (9996437).
- Catlett, S. (2010). Successful young alumni programming. A newcomer's guide to success, (pp. 131-142). Council for Advancement and Support of Educaiton. Washington, DC.

- Center on Philanthropy and Civil Society. (2013). *Latino Philanthropy Literature Review*. Retrieved from http://www.philanthropy.org/programs/literature_reviews/latino
- Chao, J. (1999). Asian-American philanthropy: Expanding circles of participation. *Cultures of Caring: Philanthropy in America's Diverse Communities*. Washington DC: Council on Foundations, pp. 189-254.
- Clotfelter, C. T. (2001). Who are the alumni donors? Giving by two generations of alumni from selective colleges. *Nonprofit Management and Leadership*, 12(2), 119-136.
- Clotfelter, C. T. (2003). Alumni giving to elite private colleges and universities. *Economics of Education Review*, 22, 109-120.
- Cobban, A. (2002). *English university life in the middle ages*. New York, NY: Taylor & Francis Pub. Co.
- Cockriel, I., & Kellogg, K. O. (1994). *Fund raising: Building constituency groups in student affairs*. Paper presented at the West Regional Conference of the National Association of Student Personnel Administrators, Aspen, CO. Abstract retrieved from <http://files.eric.ed.gov/fulltext/ED380025.pdf>
- Cohen, A. M. (2007). *The shaping of American higher education: Emergence and growth of the contemporary system*. San Francisco, CA: Jossey-Bass.
- Conley, D. (2008). *Being black, living in the red: Race, wealth, and social policy in America*. Berkeley, CA: University of California Press.

- Conner, D. K. (2005). *Factors that affect alumni giving at a southeastern comprehensive university*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (305009624)
- Cook, W. B., & Lasher, W. F. (1996). Toward a theory of fund raising in higher education. *Review of Higher Education*, 20(1), 33-51.
- Council for Aid to Education (2015). 2015 Voluntary support of education. Retrieved from www.cae.org.
- Council for Aid to Education (2016). 2016 Voluntary support of education. Retrieved from www.cae.org.
- Council for Aid to Education (2017). 2017 Voluntary support of education. Retrieved from www.cae.org.
- Creswell, J. (2012). *Educational research, planning, conducting, and evaluating quantitative and qualitative research*. Boston, MA: Pearson.
- Cunningham, B. M., & Cochi-Ficano, C. K. (2002). The determinants of donative revenue flows from alumni of higher education: An empirical inquiry. *The Journal of Human Resources*, 37, 540-569.
- Curti, M., & Nash, R. (1965). *Philanthropy in the shaping of American higher education*. New Brunswick, NJ: Rutgers University Press.
- Cutlip, S. M. (1965). *Fund raising in the United States: Its role in America's philanthropy*. New Brunswick, NJ: Rutgers University Press.
- De la Garza, R. O., & Lu, F. (1999). Explorations into Latino voluntarism. In D. Compoamor, W. A. Diaz, & H. A. J. Ramos (Eds.), *Nuevos senderos: Reflections on Hispanic and philanthropy* (pp. 55-78). Houston, TX: Arte Publico Press.

- Dean, M. S. (2007). *Factors that influence alumni major giving at doctoral research universities*. Paper presented at the CASE V Conference of the Executives in Advancement, Chicago, IL. Abstract retrieved from <http://files.eric.ed.gov/fulltext/ED521843.pdf>
- Deeney, J. J. (2002). A neglecting minority in a neglected field: The emerging role of Chinese American philanthropy in US-China relations. In P. H. Koehn, & X. Yin (eds.), *The expanding roles of Chinese Americans in US-China relations: Transnational networks and trans-pacific interactions* (pp. 162-184). Armonk, NY: M. E. Sharpe.
- Diehl, A. G. (2007). *The relationship between alumni giving and receipt of institutional scholarships among undergraduate students at a public, land-grant institution* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (304837057)
- Drezner, N. D. (2009). Why give? Exploring social exchange and organization identification theories in the promotion of philanthropic behaviors of African-American Millennials at private-HBCUs. *International Journal of Educational Advancement*, 9, 147-165.
- Drezner, N. D. (2011). Special Issue: *Philanthropy and fundraising in American higher education*. ASHE Higher Education Report, 37(2), 1-155. Hoboken, NJ: Wiley Periodicals.
- Drezner, N. D. (2013). *Expanding the donor base in higher education: Engaging non-traditional donors*. New York, NY: Routledge.

- Drezner, N. D., & Huehls, F. (2014). *Fundraising and institutional advancement: Theory, practice, and new paradigms*. New York, NY: Routledge.
- Dugan, K., Mullin, C., & Siegfried, J. (2000). Undergraduate financial aid and subsequent giving behavior. *Williams Project on the Economics of Higher Education Discussion Papers*.
- Duncan, B. (2004). A theory of impact philanthropy. *Journal of Public Economics*, 88, 2159-2180. doi:10.1016/S0047-2727(03)00037-9
- Durango-Cohen, E. J., Torres, R. L., & Durango-Cohen, P. L. (2013). Donor segmentation: When summary statistics don't tell the whole story. *Journal of Interactive Marketing*, 27(3), 172-184. doi:10.1016/j.intmar.2013.04.002
- Dvorak, T., & Toubman, S. R. (2013). Are women more generous than men? Evidence from alumni donations. *Eastern Economic Journal*, 39, 121-131. doi:10.1057/eej.2012.30
- Eckel, P. D., & King, J. E. (2007). *United States. International handbook of higher education*. pp. 1035-1053. The Netherlands: Springer.
- Einolf, C. J. (2011). Gender differences in the correlates of volunteering and charitable giving. *Nonprofit and Voluntary Sector Quarterly*. 40, 1092-1112. doi:10.1177/0899764010385949
- Ellemers, E., & Haslam, S. A. (2011). Social identity theory. In P. Van Lange, A. Kruglanski, & E. Higgins (Eds.), *Handbook of theories of social psychology: Volume two* (pp. 379-398).

- Enyard, R. K. (1993). *A study of the effect of the receipt of financial aid on the rate of giving by alumni at a public mid-west university* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (304044119)
- Feudo, J. (2010). Alumni relations. A Newcomer's Guide to Success. *Council for Advancement and Support of Education*. Washington, DC.
- Fiske, S. T., Gilbert, D. T., & Lindzey, G. (2010). *Handbook of social psychology*. Chichester, UK: Wiley.
- Frank, K. A. (2014). *Twenty-five years of giving: Using a national data set to examine private support for higher education* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (3665141)
- Freeland, R. E., Spenner, K. I., & McCalmon, G. (2015). I gave at the campus: Exploring student giving and its link to young alumni donations after graduation. *Nonprofit and Voluntary Sector Quarterly*, 44, 755-774. doi:10.1177/0899764014529625
- Freeman, K., & Cohen, R. T. (2001). Bridging the gap between economic development and cultural empowerment HBCU's challenges for the future. *Urban Education*, 36, 585-596.
- Fuller, M. B. (2014). A history of financial aid to students. *Journal of Student Financial Aid*, 44(1), 42-68.
- Gaier, S. E. (2001). Increasing alumni involvement and alumni financial support through a student alumni association. (ERIC Document Reproduction Service No. ED 451 767).

- Gaier, S. E. (2005). Alumni satisfaction with their undergraduate academic experience and the impact on alumni giving and participation. *International Journal of Educational Advancement*, 5, 279-288.
- Galligan, C. J. (2013). *Alumni of varying eras: An examination of the differences in factors that influence feelings of connectivity and reasons for giving* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (1271958879)
- Gasman, M. (2002). An untapped resource: Bringing African Americans into the college and university giving process. *CASE International Journal of Educational Advancement*, 280-291.
- Gasman, M. (2007). *Envisioning black colleges: A history of the United Negro College Fund*. Baltimore, MD: John Hopkins University Press.
- Gasman, M. (2010). A growing tradition?: Examining the African American family foundation. *The Aspen Institute*, Retrieved from http://repository.upenn.edu/gse_pubs/346
- Gasman, M., & Bowman, N. (2013). Engaging and soliciting African American alumni. In N. D. Drezner (Ed.), *Expanding the donor base in higher education* (pp. 15-25). New York, NY: Routledge.
- Geithner, P. F., Johnson, P. D., & Chen, L. C. (2004). *Diaspora philanthropy: Perspectives on India and China*. Cambridge, MA; Harvard University.
- Goldin, M. (1988). The founding fathers of modern philanthropy. *Fund Raising Management*, 19, 48-51.

- Goldseker, S., & Moody, M. (2013). Young wealthy donors bring tastes for risk, hands-on involvement to philanthropy. *Chronicle of Philanthropy*.
- Gottfried, M. A., & Johnson, E. L. (2006). Solicitation and donation: An econometric evaluation of alumni generosity in higher education. *International Journal of Educational Advancement*, 6, 268-281.
- Grill, A. J. (1988). *An analysis of the relationships of selected variables to financial support provided by alumni of a public university* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (303722175)
- Hall, P. D. (1996). *Inventing the nonprofit sector*. Baltimore, MD: Johns Hopkins University Press.
- Hall-Russell, C., & Kasberg, R. (1997). *African American traditions of giving and serving: A Midwest perspective*. Indianapolis, IN: Center on Philanthropy at Indiana University.
- Hartley, M. (2009). Reclaiming the democratic purpose of American higher education: Tracing the trajectory of the civic engagement movement. *Learning and Teaching*, 2(3), 11-30.
- Hauptman, A. M. (1997). Financing American higher education in the 1990s. *New Directions for Institutional Research*, 93, 19-35. doi:10.1002/ir.9302
- Havens, J., & Schervish, P. (2007). Geography and giving. The culture of philanthropy in New England. Boston, MA: Center on Wealth and Philanthropy. Retrieved from <http://www.tbf.org/uploadedFiles/GeoGivingReport2007.pdf>

- Ho, A. (2004). Asian-American philanthropy: Expanding knowledge, increasing possibilities. Paper presented at the 2004 Annual Conference of Association for Research on Nonprofit Organizations and Voluntary Actions, Indianapolis, IN.
- Hoffman, R. M., Hattie, J. A., & Borders, D. (2005). Personal definitions of masculinity and femininity as an aspect of gender self-concept. *Journal of Humanistic Counseling, Education and Development*, 44(5), 66-83.
- Holmes, J. (2009). Prestige, charitable deductions and other determinants of alumni giving: Evidence from a highly selective liberal arts college. *Economics of Education Review*, 28, 18-28. doi:10.1016/j.econedurev.2007.10.008
- Hosmer, D. W., & Lemeshow. (1980). Goodness of fit tests for the multiple logistic regression model. *Communications in Statistics-Theory and Methods*, 9(10), 1043-1096.
- Higher Education, House Bill 100 (2015).
- House, M. L. (1987). *Annual fund raising in public higher education: The development and validation of a prediction equation* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (303568881)
- Indiana University Lilly Family School of Philanthropy (2018). *The Philanthropy Outlook 2017 & 2018*. Retrieved from http://philanthropyoutlook.com/wp-content/uploads/2017/01/Philanthropy_Outlook_2017_2018.pdf
- Jaquette, O., & Curs, B. R. (2015). Creating the out-of-state university: Do public universities increase nonresident freshman enrollment in response to declining state appropriations? *Research in Higher Education*, 56, 531-564. doi:10.1007/s11162-015-9362-2

- Jenny, N. W., & Arbak, E. (2004, March). Challenges for financing public higher education. *The Rockefeller Institute State Fiscal News*, 4(2).
- Johnson, R. B., & Christensen, L. (2017). *Educational research quantitative, qualitative, and mixed approaches*. Thousand Oaks, CA: SAGE Publications, Inc.
- Kane, T. J., Orszag, G., & Gunter, D. L. (2003). *State fiscal constraints and higher education spending: The role of Medicaid and the business cycle*. Discussion Paper #11. Washington, D.C.: Urban Institute.
- Kelly, K. S. (2000). Stewardship the missing step in the public relations process. In R. Health (Ed.), *Handbook of public relations*. Thousand Oaks, CA: Publications, Inc.
- Kim, M. M., & Ko, J. (2015). The impacts of state control policies on college tuition increase. *Educational Policy*, 29, 815-838. doi:10.1177/0895904813518100
- King, W. (1991). *Washington Duke and the education of women*. Washington Duke Papers. Archives of the Duke University Historical Notes, Duke University, Durham, NC. Retrieved from http://library.duke.edu/uarchives/history/histnotes/w_duke_womens_ed.html
- Kumar, R. (2011). *Research methodology: A step-by-step guide for beginners*. Thousand Oaks, CA: SAGE Publications, Inc.
- Lani, J. (2010). Assumptions of logistic regression. *Statistics Solutions*. Retrieved from <http://www.statisticssolutions.com/assumptions-of-logistic-regression/>
- Lara, C., & Johnson, D. (2014). The anatomy of a likely donor: Econometric evidence on philanthropy to higher education. *Education Economics*, 22(3), 293-304.

- Lawley, C. D. (2008). *Factors that affect alumni loyalty at a public university* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (304500738)
- Le Blanc, L. A., & Rucks, C. T. (2009). Data mining of university philanthropic giving: Cluster-discriminant analysis and pareto effects. *International Journal of Educational Advancement*, 9(2), 64-82.
- Lee, R. (1990). *Guide to Chinese American philanthropy and charitable giving patterns*. San Rafael, CA: Pathway Press.
- Lee, Y. J. (2017). Understanding higher education institutions' publicness: Do public universities produce more public outcomes than private universities? *Higher Education Quarterly*, 71, 182-203. doi:10.1111/hequ.12120
- Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social media & mobile internet use among teens and young adults. Millennials. *Pew Internet & American Life Project*. Retrieved from <http://files.eric.ed.gov/fulltext/ED525056.pdf>
- Levitt, L., & Kornhaber, R. C. (1997). Stigma and compliance. A re-examination. *Journal of Social Psychology*, 103(1), 13-18.
- Lincoln, C. E., & Mamiya, L. H. (1990). *The Black church in African American experience*. Raleigh, NC: Duke University Press.
- Lofton, W. J. (2005). *Commonalities among experiences of supportive alumni of the university of southern Mississippi* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (305432289)
- Lohr, S. L. (2010). *Sampling: Design and analysis* (2nd ed.). Boston, MA: Brooks/Cole.

- Loveday, C. H. (2012). *An analysis of the variables associated with alumni giving and employee giving to a mid-sized southeastern university* (Doctoral dissertation). Retrieved from ProQuest Dissertation & Theses Global. (3574390)
- Lucas, C. A. (2016). *American higher education: A history, 2nd edition*. New York, NY: Palgrave Macmillan.
- Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior, 13*, 103-123.
- Mann, T. (2007). College fund raising using theoretical perspectives to understand donor motives. *International Journal of Educational Advancement, 7*(1), 35-45.
- Marr, K. A., Mullin, C. H., & Siegfried, J. J. (2005). Undergraduate financial aid and subsequent giving behavior. *Quarterly Review of Economics and Finance, 45*, 123-143.
- Martin, J. C. (1993). *Characteristics of alumni donors and non-donors at a research I, public university* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (304093123)
- McAnear, B. (1952). The raising of funds by the colonial colleges. *The Mississippi Calley Histortical Review, 38*, 591-612.
- McDearmon, J. T., & Shirley, K. (2009). Characteristics and institutional factors related to young alumni donors and non-donors. *International Journal of Educational Advancement, 9*(2), 83-95.

- McKee, D. F. (1975). *An analysis of factors which affect alumni participation and support*. (Doctoral dissertation). Retrieved from ProQuest Dissertation & Theses Global. (302731963)
- Meer, J., & Rosen, H. S. (2010). Family bonding with universities. *Research in Higher Education, 51*, 641-658.
- Meer, J., & Rosen, H. S. (2012). Does generosity beget generosity? Alumni giving and undergraduate financial aid. *Economics of Education Review, 31*, 890-907.
- Menard, S. W. (2010). *Logistic regression: From introductory to advanced concepts and applications*. Los Angeles: SAGE Publications, Inc.
- Mesch, D. J., Brown, M. S., Moore, Z., & Hayat, A. H. (2011). Gender differences in charitable giving. *International Journal of Nonprofit and Voluntary Sector Marketing, 16*(4), 291-297.
- Mesch, D. J., Rooney, P. M., Steinberg, K. S., & Denton, B. (2006). The effects of race, gender, and marital status on giving and volunteering in Indiana. *Nonprofit and Voluntary Sector Quarterly, 35*, 565-587.
- Milkman, R. (2017). A new political generation: Millennials and the post-2008 wave of protest. *American Sociological Review, 82*(1), 1-31.
doi:10.177/0003122416681031
- Miller, M. T. (1993). Historical perspectives on the development of academic fund raising. *Journal of Instructional Psychology, 20*(3), 237-243.
- Miller, M. T., & Casebeer, L. (1991). Donor characteristics of college of education alumni: Examining undergraduate involvement. ERIC Document Reproduction)
Retrieved from: <http://files.eric.ed.gov/fulltext/ED323836.pdf>

Miracle, W. D. (1977). *Differences between givers and nongivers to the University of Georgia annual fund*. (Doctoral dissertation). Retrieved from ProQuest

Dissertation & Theses Global. (302853614)

Mitchell, M., Leachman, M., & Masterson, K. (2017). Alost decade in higher education funding state cuts have driven up tuition and reduced quality. Washington, DC:

Center on Budget and Policy Priorities. Retrieved from

https://www.cbpp.org/sites/default/files/atoms/files/2017_higher_ed_8-22-17_final.pdf

Mowlson, A. R. (1643, May 9). Bequest of Lady Mowlson. Cambridge, MA, United States of America. Retrieved from

<http://ids.lib.harvard.edu/ids/view/24938613?buttons=y>

Monks, J. (2003). Patterns of giving to one's alma mater among young graduates form selective institutions. *Ecnomics of Education Review*, 22, 121-130.

doi:10.1016/S0272-7757(02)00036-5

Moore, M. (2012). Interactive media usage among millennial consumers. *Journal of Consumer Marketing*, 29(6), 436-4.

Morison, S. E. (1935). *The founding of Harvard college*. Cambridge, MA: Harvard University Press.

National Center for Education Statistics. (1997). *Digest of education statistics 1997*.

Washington, D.C.: U.S. Department of Education

National Center for Education Statistics. (2012). *Digest of education statistics 2012*.

Washington, D.C.: U.S. Department of Education.

- Okunade, A. A. (1993). Logistic regressions and probability of business school alumni donations: Micro-data evidence. *Education Economics*, 1, 243-258.
- Okunade, A. A. (1996). Graduate school alumni donations to academic funds: Micro-data evidence. *American Journal of Economics and Sociology*, 55, 213-229.
- Okunade, A. A., & Berl, R. L. (1997). Determinants of charitable giving of business school alumni. *Research in Higher Education*, 38, 201-214.
- Okunade, A. A., Wunnava, P., & Walsh, R. (1994). Charitable giving of alumni: Micro-data evidence from a large public university. *American Journal of Economics and Sociology*, 53, 73-84. doi:10.1111/j.1536-7150.1994.tb02674.x
- Oliff, P., Palacios, V., Johnson, I., & Leachman, M. (2013). Recent deep state higher education cuts may harm students and the economy for years to come. Washington, DC: Center on Budget and Policy Priorities. Retrieved from <https://www.cbpp.org/sites/default/files/atoms/files/3-19-13sfp.pdf>
- Olsen, K., Smith, A. L., & Wunnava, P. V. (1989). An empirical study of the life-cycle hypothesis with respect to alumni donations. *American Economist*, 33(2), 30-63.
- Oliver, F. H. (1999). *Fellow beggars: The history of fund raising campaigning in United States higher education* (Doctoral dissertation). Retrieved from ProQuest Dissertation & Theses Global. (9939532)
- Onwuegbuzie, A. J., & Daniel, L. G. (2002). Uses and misuses of the correlation coefficient. *Research in the schools*, 9(1), 73-90.
- Onwuegbuzie, A. J., & Leech, N. L. (2007). Sampling designs in qualitative research: Making the sampling process more public. *Qualitative Report*, 12(2), 238-254.

- Pedhazur, E. J. (1997). *Multiple regression in behavioral research: Explanation and prediction*. San Diego, CA: Harcourt Brace College.
- Petty, J. G. (2002). Can remittances increase charitable giving among immigrant families? *New Directions for Philanthropic Fundraising*, 37, 35-44.
- Pew Research Center (2010). *Generations 2010*. Washington, DC: Pew Research Center.
- Pew Research Center (2012). *The rise of Asian Americans*. Washington, DC: Pew Research Center.
- Piliavin, J. A., & Charng, H. (1990). Altruism: A review of recent theory and research. *Annual Review of Sociology*, 16, 27-65.
- Piper, G., & Schnepf, S. V. (2008). Gender differences in charitable giving in Great Britain. *Annual Review of Sociology*, 16, 27-65.
- Proper, E., & Caboni, T. C. (2014). *Institutional Advancement What We Know*. New York, NY: Palgrave MacMillan.
- Proper, E., Caboni, T. C., Hartley, H. V., & Willmer, W. K. (2009). More bang for the buck: Examining influencers of fundraising efficiency and total dollars raised. *International Journal of Educational Advancement*, 9(1), 35-41.
- Richards, M. D., & Sherratt, G. R. (1981). Institutional advancement strategies in hard times. AAHE-ERIC/Higher education research report no. 2. Retrieved from <https://eric.ed.gov/?id=ED207475>
- Rizzo, M. J. (2004). *A (less than) zero-sum game? State funding for public higher education: How public education institutions have lost*. (Doctoral dissertation). Retrieved from ProQuest Dissertation & Theses Global. (3140814)

- Ramos, H. A. J. (1999). *Latino philanthropy: Expanding U.S. models of giving and civic participation*. Berkeley, CA: Mauer Kunst Consulting.
- Roberts, R. D. (1984). A positive model of private charity and public transfers. *Journal of Political Economy*, 92(1), 136-148.
- Roy-Rasheed, L. D. (2013). *Alumni giving: A case study of the factors that influence philanthropic behavior of alumni donors of historically black colleges and universities*. (Doctoral dissertation). Retrieved from ProQuest Dissertation & Theses Global. (3547160)
- Rudolph, F. (1990). *The American college and university: A history*. Athens, GA: University of Georgia Press.
- Sax, L. J. (2000). Citizenship development and the American college student. In T. Ehrlich (Ed.), *Civic responsibility and higher education* (p. 3-17). Phoenix, AZ: Oryx Press.
- Schuh, J. H. (1993). Fiscal pressures on higher education and student affairs. In M. Barr (Ed.), *The handbook of student affairs administration* (p. 49-68). San Francisco, CA: Jossey-Bass.
- Schwartz, S. H. (1977). Normative influences on altruism. *Advances in Experimental Social Psychology*, 10, 221-279.
- Sears, J. B. (1922). *Philanthropy in the history of American higher education*. Washington, D.C.: U.S. Government Printing Office.
- Sears, J. (1990). *Philanthropy in the history of American higher education*. New Brunswick, NJ: Transaction.

- Selig, C. W. (1999). *A study of donor predictability among alumni athletes at the University of Virginia* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (304532186)
- Seltzer, R. (2017). State support for higher education increased in 2016, not counting Illinois. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2017/04/20/state-support-higher-education-increased-2016-not-counting-illinois>
- Sharpe, Jr., R. F., & Mann, B. T. (2017) *The impact of the "tax cuts and jobs act of 2017" on charitable giving* [White paper]. Retrieved from Sharpe <http://sharpenet.com/wp-content/uploads/2018/01/2017-Tax-Reform-Impact-White-Paper-12-1.pdf>
- Simon, J. Y. (1963). The politics of the Morrill Act. *Agricultural History*, 37(2), 103-111.
- Steeper, D. (2009). *The effects of selected undergraduate students involvement and alumni characteristics on alumni gift-giving behavior at the University of Virginia* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (305011140)
- Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly*, 63(3), 224-237.
- Stutler, D., & Calvario, D. (1996). In alumni support, satisfaction matters. *Fund Raising Management*, 27(9), 12-14.
- Sun, X., Hoffman, S. C., & Grady, M. L. (2007). A multivariate causal model of alumni giving: Implications for alumni fundraisers. *International Journal of Educational Advancement*, 7(4), 307-332.

- Tajfel, H. (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations*. London, England: Academic Press.
- Tajfel, H., & Turner, J. C. (1985). Social identity theory and the organization. *Academy of Management Review*, 14, 20-39.
- Tajfel, H., & Turner, J. C. (2004). Social identity theory of intergroup behavior. In J. Jost, & J. Sidanius (Eds.), *Key readings in social psychology. Political psychology: Key readings* (pp. 276-293). New York, NY: Psychology Press.
- Taylor, A. L., & Martin, J. C. (1995). Characteristics of alumni donors and nondonors at a research 1, public university. *Research in Higher Education*, 36(3), 283-302.
doi:10.1007/BF02208312
- Texas Higher Education Data (2015). *Online resume for prospective students, parents and the public*. Retrieved from
http://reports.thecb.state.tx.us/ibi_apps/WFServlet.ibfs
- Thelin, J. R. (2011). *A history of American higher education*. Baltimore, MD: John Hopkins University Press.
- Thomas, J. A. (2005). *The relationship between personal and social growth and involvement in college and subsequent alumni giving* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (305343822)
- Thomas, J. A., & Smart, J. (2005). *The relationship between personal and social growth and involvement in college and subsequent alumni giving*. Paper presented at the Annual Forum of the Association for Institutional Research, San Diego, CA.
Abstract retrieved from <http://files.eric.ed.gov/fulltext/ED491032.pdf>

- Thompson, L. A. (2010). *Data mining for higher education advancement: A study of eight North American colleges and universities* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (822168028)
- Ting-Yuan Ho, A. (2006). *Charitable giving: What makes a person generous?* (Master's thesis). Retrieved from https://repository.library.georgetown.edu/bitstream/handle/10822/556011/etd_ath6.pdf?sequence=4&isAllowed=y
- Touré-Tillery, M., & Fishbach, A. (2017). Too far to help: The effect of perceived distance on the expected impact and likelihood of charitable action. *Journal of Personality and Social Psychology*, 112, 860-876.
- Toutkoushian, R. K. (2003). Weathering the storm: Generating revenues for higher education during a recession. *New Directions for Institutional Research*, 119, 27-40. doi:10.1002/ir.82
- Tsunoda, K. (2010). Asian American giving to US higher education. *International Journal of Educational Advancement*, 10, 2-23. doi:10.1057/ijea.2010.4
- Turner, J., & Oakes, P. (1986). The significance of the social identity concept for social psychology with reference to individualism, interactionism and social influence. *British Journal of Social Psychology*, 25(3), 237–252.
- Tutorow, N. E. (2004). *The governor: The life and legacy of Leland Stanford, a California colossus*. Spokane, WA: Arthur H. Clark.
- U. S. Census Bureau (2015). *Millennials outnumber baby boomers and are far more diverse, census bureau reports*. Retrieved from <https://www.census.gov/newsroom/press-releases/2015/cb15-113.html>

- Veysey, L. R. (1965). *The emergence of the American university*. Chicago, IL: University of Chicago Press.
- Wagner, L., & Hall-Russell, C. (1999). The effectiveness of fundraising training in Hispanic religious organizations. *Philanthropic Fundraising*, 85-104.
doi:10.1002/pf.2406
- Ward, H. (2004). *The impact of collegiate involvement on African-American alumni giving*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses Global. (305218079)
- Warner, R. M. (2013). *Applied statistics: From bivariate through multivariate techniques*. Thousand Oaks, CA: SAGE Publications, Inc.
- Wastyn, M. L. (2009). Why alumni don't give a qualitative study of what motivates non-donors to higher education. *International Journal of Educational Advancement*, 9(2), 96-108.
- Weerts, D. J. (2014). State funding and the engaged university: Understanding community engagement and state appropriations for higher education. *The Review of Higher Education*, 38, 133-169. doi:10.1353/rhe.2014.0038
- Weerts, D. J., & Ronca, J. M. (2006). Characteristics of alumni donors who volunteer at their alma mater. *Research in Higher Education*, 2008(49), 274-292.
doi:10.1007/s11162-007-9077-0
- Weerts, D. J., & Ronca, J. M. (2007). Profiles of supportive alumni: Donors, volunteers, and those who "do it all". *International Journal of Educational Advancement*, 7(1), 20-34.

- Weerts, D. J., & Ronca, J. M. (2009). Using classification trees to predict alumni giving for higher education. *Education Economics*, 17, 95-122.
- Whalen, M. L. (2001). A land-grant university. Reprinted from Cornell University 2001-02 Financial Plan.
- Williams, S. R. (2007). Donor preferences and charitable giving. *International Journal of Educational Advancement*, 7(3), 176-189.
- Worth, M. J. (1993). *Educational fund raising: Principles and practice*. Phoenix, AZ: Oryx Press.
- Worth, M. J. (2002). *New strategies for educational fundraising*. Westport, CT: Praeger Publishers.
- Wunnava, P., & Lauze, M. (2001). Alumni giving at a small liberal arts college: Evidence from consistent and occasional donors. *Economics and Education Review*, 20, 533-43.
- Yin, X. (2004). A case study on transnationalism continuity and changes in Chinese American philanthropy to China. *American Studies*, 45(2), 65-99.
- Yörük, B. K. (2010). Charitable giving by married couples revisited. *The Journal of Human Resources*, 45, 497-516.
- Young, P. S., Fischer, N. M., & Norman, M. (1996). Identifying undergraduate and postcollege characteristics that affect alumni giving. Paper presented at the Annual Forum of the Association for Institutional Research, Albuquerque, NM.
- Zunz, O. (2012). *Philanthropy in America: A history*. Princeton, NJ: Princeton University Press.

APPENDIX A

Kelsey M. Christian

E-mail: [REDACTED]@[REDACTED]

Cell: [REDACTED]

December 1, 2017

Dear Frank,

As you may know, I am working towards the completion of my Doctor of Education in Higher Education Leadership at Sam Houston State University. My dissertation is titled *Identifying Demographic Variables That Can Predict Alumni Giving at a Regional Comprehensive Four-Year University in The South*. The purpose of my study is to investigate demographic variables related to whether an alumnus donates financially to his/her alma mater. I anticipate findings from this research to be of considerable importance to development officers in the region and throughout the nation.

My dissertation proposal has been approved by the faculty in Educational Leadership and upon IRB approval from Sam Houston State University I will be able to access data to begin analysis. I am requesting access to the Office of University Advancement's Raiser's Edge database on all living alumni. The data necessary to complete my dissertation are age, gender, race/ethnicity, marital status, academic college/major, year of graduation, zip code, professional title, level of education, and dual graduate marriage status. Per SHSU Institutional Review Board policies, data should be anonymous and de-identified by removing all names, addresses, emails, and social security numbers. The Institutional Review Board also requires a letter of support before my studies can begin. Assuming permission is granted to access the data from Raiser's Edge, I have enclosed a sample letter of support. After the IRB approves my study, we can finalize data transfer procedures.

Thank you for your consideration of this request. Should you prefer, I am available for a meeting to discuss my research in detail. For my purposes, it would be helpful to receive a signed letter of support by December 13, 2017. Please feel free to call me directly at [REDACTED] if I can address any questions or concerns you may have regarding this study. Alternatively, you may also contact my dissertation chair, Dr. Matthew Fuller ([REDACTED]).

Best regards,

Kelsey Christian
Ed.D Candidate
Sam Houston State University

Encl: Sample approval letter
cc: Matthew B. Fuller, PhD

APPENDIX B



Frank R. Holmes
Vice President

Sam Houston State University

MEMBER THE TEXAS STATE UNIVERSITY SYSTEM

OFFICE OF UNIVERSITY ADVANCEMENT

December 6, 2017

Ms. Kelsey M. Christian
SHSU Doctoral Candidate
[REDACTED]
[REDACTED]

Dear Kelsey:

The University Advancement Division at Sam Houston State University agrees to provide support to your dissertation research project, *Identifying Demographic Variables That Can Predict Alumni Giving at a Regional Comprehensive Four-Year University in The South*.

Our Advancement Services Department will provide unidentifiable alumni data for your research. Records will not contain identifying information for alumni individuals, such as name, mailing and email addresses, and social security numbers. Advancement Services will remove all personally identifying data prior to sending you the alumni record information requested by you.

You will be working with Patty Lewis, director of Advancement Services. In supporting your research project, she and her department will be safeguarding the complete confidentiality of all alumni and adhering to the privacy policies of our university.

We look forward to working with you on what appears to be a very interesting and useful project and learning more about your findings in the months to come. I wish you well on the successful completion of your dissertation.

Sincerely,

Frank R. Holmes
Vice President

c: Patty Lewis, Director of Advancement Services

Sam Houston State University is an Equal Opportunity/Affirmative Action Institution

Box 2537 • Huntsville, Texas 77341-2537 • 936.294.3625 • Fax 936.294.1993

APPENDIX C



Institutional Review Board
 Office of Research and Sponsored Programs
 1831 University Ave, Suite 303, Huntsville, TX 77341-2448
 Phone: 936.294.4875
 Fax: 936.294.3622
irb@shsu.edu
<http://www.shsu.edu/dept/office-of-research-and-sponsored-programs/compliance/irb/>

DATE: January 28, 2018

TO: Kelsey Christian [Faculty Sponsor: Dr. Matt Fuller]

FROM: Sam Houston State University (SHSU) IRB

PROJECT TITLE: *Identifying Demographic Variables that can Predict Alumni Giving at a Regional Comprehensive Four-Year University in the South [T/D]*

PROTOCOL #: 2018-01-37491

SUBMISSION TYPE: INITIAL REVIEW

ACTION: DETERMINATION OF EXEMPT STATUS

DECISION DATE: January 28, 2018

REVIEW CATEGORY: Category 4—research involving existing, publicly available data usually has little, if any, associated risk, particularly if subject identifiers are removed from the data or specimens.

Thank you for your submission of Initial Review materials for this project. The Sam Houston State University (SHSU) IRB has determined this project is EXEMPT FROM IRB REVIEW according to federal regulations.

We will retain a copy of this correspondence within our records.

*** What should investigators do when considering changes to an exempt study that could make it nonexempt?**

It is the PI's responsibility to consult with the IRB whenever questions arise about whether planned changes to an exempt study might make that study nonexempt human subjects research. In this case, please make available sufficient information to the IRB so it can make a correct determination.

If you have any questions, please contact the IRB Office at 936-294-4875 or irb@shsu.edu. Please include your project title and protocol number in all correspondence with this committee.

Sincerely,

Donna Desforges
 IRB Chair, PHSC

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Sam Houston State University IRB's records.

VITA

Kelsey M. Christian

EDUCATION

Doctor of Education, Higher Educational Leadership in Higher Education, August 2018. *Sam Houston State University, Huntsville, TX*
Dissertation: Identifying Demographic Variables That Can Predict Alumni Giving at a Regional Comprehensive Four-Year University in the South

Master of Science in Agricultural Science, August 2004
Sam Houston State University, Huntsville, TX

Bachelor of Science in Agricultural Business, May 2002
Texas A&M University, College Station, TX

PROFESSIONAL EXPERIENCE

Texas A&M Foundation, Senior Director of Development
(2018-present)

Texas A&M Foundation, Director of Development
(2015-2018)

Sam Houston State University, Director of Development
(2009-2015)

Texas AgriLife Extension Service, 4-H & Youth Development
(2005-2009)

PUBLICATIONS

Byers, V. T., Smith, R. N., Hwang, E., Angrove, K. E., Chandler, J. I., Christian, K. M.,...Denham, M. A. (2013, June). Survival strategies: Doctoral students' perceptions of challenges and coping methods. *International Journal of Doctoral Studies*, 9, 109-136.

PRESENTATIONS AT PROFESSIONSL MEETINGS

Byers, V. T., Smith, R. N., Hwang, E., Angrove, K. E., Chandler, J. I., Christian, K. M.,...Denham, M. A. (2013, June). Survival strategies used by doctoral students: A critical dialectical pluralistic approach. Paper presented at the 12th Annual Advances in Qualitative Methods Conference, Edmonton, Alberta, Canada.

Professional and Organizational Affiliations

Council for Advancement and Support of Education (CASE)