ALUMNI IDENTITY: A STRUCTURAL EQUATION APPROACH TO BELIEFS AND BEHAVIORS

by

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Alumni Identity: A Structural Equation Approach to Beliefs and Behaviors

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ABSTRACT

The relationships between alumni identity, engagement, and donations have been widely studied, but their true nature is still largely unknown due to the diverse factors suspected to contribute to donor motivations. Using the framework of organizational identity (OID) theory, this study comprehensively examined the way in which these constructs interact with each other using structural equation modeling (SEM). The alumni community of a small, selective, liberal arts college served as the population of interest. The data consisted of an alumni survey, institutional engagement information, donation records, and demographic information. The three tested models differed in how donations were measured and utilized separate outcome variables: donor status, cumulative giving, and number of gifts. The results suggested different relationship characteristics in each model, emphasizing the importance of using multiple metrics in alumni donation research. Engagement was found to significantly predict both OID and donations in every model, and its significance highlights OID theory’s deficiency in accounting for relevant post-graduation experiences. The donor status model most supported OID theory by showing the importance of identity in initial support behaviors. The other models did not support the theory and emphasized the importance of using engagement as a predictor variable. Engagement was a stronger predictor than OID for both total giving and the number of gifts. While engagement is a consistently strong predictor of donations, there is evidence of the relationship being mediated by OID. OID was not significant in
predicting total giving. The models advance the understanding of the field by showing that while both engagement and identity are key to predicting donations, identity is more crucial to the initial giving decision, and engagement is key to formation of long-term giving habits and increased amounts of support.
DEDICATION

This dissertation is dedicated to Hannah. Marrying her was the best decision I ever made, and she has held me up during this whole process while showing unconditional love and unwavering support.
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CHAPTER I
INTRODUCTION

Fundraising is not only crucial for the modern-day operations of colleges and universities, it has been an integral part of the higher education movement in America since its beginning. Even the United States’ first institution, Harvard University, was launched into sustained prominence by its namesake, John Harvard, who generously donated an estate gift and a large book collection shortly after the college’s charter (Hood, 1991). That spirit of philanthropy has remained present in higher education, especially with the reliance of alumni support. According to the Council for Aid to Education (CAE), approximately 10% of college and university expenditures each year are directly covered by philanthropic support (Seltzer, 2018). This reliance on donations is even more present at private colleges, where the institutions are not bolstered by direct government funding. At these colleges, a steady endowment is a safety net against temperamental admission fluctuations and an expensive competition to demonstrate excellence in the areas of educational quality, facilities, and amenities (Horn, 2018).

Additionally, the situation is growing increasingly dire as high-profile college closures at Southern Vermont College, Green Mountain College, Marygrove College, and Newbury College serve as cautionary tales about what happens when financial instability occurs (Fain, 2019). Demographic trends bring even more dire circumstances for colleges relying primarily on tuition. A significant drop in birth rates occurred around the Great Recession, and there simply will not be enough incoming traditional students to fill current college campuses in the coming years. Horn (2018) predicted that 25% of institutions will close or go bankrupt in the next 10-15 years because their financial
models are not prepared for this downturn amidst growing competition in new forms of education. The only way to guarantee long-term success for private colleges is to shift away from tuition reliance and build large bases of philanthropic support, primarily from those who care most about the colleges’ success, their graduates.

**Statement of the Problem**

To accomplish long-term alumni support, it is imperative for colleges to cultivate and maintain high quality alumni affinity, and for alumni to see themselves as active members of the college community long after graduation. The problem with accomplishing this goal is that practitioners in institutional advancement operations do not have a complete understanding of the components that go into building a relationship and leveraging the relationship for support. The field of predicting affinity and donor behavior is well studied, with significant advances in donor prediction models based on demographics and collegiate experiences (Drezner & Huehls, 2014). However, no known studies have examined alumni identity characteristics through a comprehensive structural equation model (SEM), taking into account the emerging idea that the construct of alumni engagement both influences, and is influenced by, alumni beliefs about their connection to the college. By doing so, this study advances the field by comprehensively explaining the relationships between four important factors: engagement, alumni identity, donations, and demographics.

**Purpose of the Study**

The purpose of this study is to visualize and determine the relationship between alumni identification with the college, their engagement with it, and their donation behaviors. SEM was used to understand these relationships because of the method’s
versatility and usefulness in mapping complex connections. The proposed model tested the idea that engagement affects identity, which then affects donations. It also tested if the various measures of donations change the relationship characteristics. This methodology has never been applied to the study of these constructs’ relationships. This study used Mael and Ashforth’s (1992) organizational identity (OID) theory as its framework, which hypothesizes that alumni support their college due to a sense of connectedness stemming from key antecedents. While the study used OID framework, it departed from the original model by using alumni engagement as a predictor of donation behaviors, specifically testing how engagement influences, and is influenced by, alumni identity. The research was conducted on a sample of the alumni population of a small, selective liberal arts college in the western region of the United States. The college was particularly ideal for this research due to the presence of the OID college antecedents of distinctiveness, prestige, intercollege competition, and low intra-college competition.

**Research Questions**

This study sought to gain a better understanding of alumni donor motivations and how beliefs and behaviors serve as philanthropic predictors. Specifically, the following research questions guided the study:

1. What is the nature of the relationships between engagement behaviors, alumni identity, and donations?

2. Do the relationships follow Mael and Ashforth’s (1992) OID framework?

To answer these questions, the study used data from an alumni survey and college records from a selective liberal arts college. Twelve survey items were synthesized into a construct of alumni identity. Similarly, an alumni engagement construct was derived
from four engagement activities that have suspected relationships to OID: event attendance, volunteering, digital engagement, and being the parent of a current or former student. Six additional variables were used as controls in the SEM: estimated household income, class year, race/ethnicity, marital status, degree concentration, and geographic distance from the college. These combined measures were used in the model to predict donations on a representative sample of 1,922 alumni survey respondents. Donations were measured in three distinct ways: donor status, total number of lifetime gifts (compared to peers), and total lifetime donation amounts (compared to peers).

Both research questions were answered by the SEM. The first is answered by mapping out the various pathways and determining their strength and significance. The results are valuable in adding to the understanding of the way in which giving behaviors can be framed and predicted. The second question was answered by comparing the results of the analysis to Mael and Ashforth’s (1992) proposed framework.

**Theoretical Framework**

This study used OID theory to frame the reasons alumni choose to donate money to their alma mater. This theory is prominent in the field because it recognizes alumni often view the college as a personified entity, and they can strongly identify with it. According to Mael and Ashforth (1992), OID is “a perceived oneness with an organization and the experience of the organization’s successes and failures as one’s own” (p. 103). Mael and Ashforth derived this theory as a convergence of organizational management principles in combination with Turner and Reynolds’ (2010) social identity theory. Researchers using these models have found the donors’ identification of themselves in a cause, or a sense of “we-ness,” is correlated to financial giving (Jackson
et al., 1995). Pertinent examples of OID in the higher education setting include how individuals describe themselves, such as “I am an alumna of…” (Mael & Ashforth, 1992). This sense of connectedness begins as a student, as a positive undergraduate experience stimulates the bond to the college as an alumnus/na (Drezner & Huehls, 2014).

Mael and Ashforth (1992) stated the sense of connectedness or identification between alumni and their colleges is affected by several factors: four on the organizational level and six on the individual level (Figure 1). First, the authors proposed that the following organizational antecedents (perceived characteristics of the college) significantly affect support: distinctiveness, prestige, intercollege competition, and intra-organizational competition. The alumnus/na’s feelings of the college as distinctive and prestigious positively affect OID. The effect of competition is complicated, as competition between the college and another school, such as a sports rivalry, positively affects identity, while competition within the school negativity affects it. Intra-organizational competition may be experienced when multiple departments or offices solicit the same alumnus/na for support, rather than employing an organized institutional fundraising effort (Mael & Ashforth, 1992). The authors carried out their study on a small private college because it was what Whetten (2006) describes as a holographic organization (where organizational members share a common identity) rather than an idiographic organization (where subunit-specific identities are prominent).

Mael and Ashforth (1992) posited six factors that predict OID at the individual level: tenure, mentorship, recentness of membership, membership of similar organizations, satisfaction, and sentimentality. Tenure, or the time spent at the institution,
and the existence of a college mentor have a positive effect. Recentness of membership (college enrollment) also is a positive factor. Similarly, if the alumnus/na has membership in several organizations, such as graduate schools or colleges from which they transferred, a suspected decrease in OID is suspected. Finally, satisfaction and sentimentality are positive predictors of OID. Satisfaction is defined as the alumnus/na’s overall rating of their educational experience. Sentimentality describes the feelings of fondness about their time at the institution (Mael & Ashforth, 1992). A diagram of the OID antecedent path model is provided in Figure 1.

**Figure 1**

*Proposed Correlates of Organization Identification*

![Diagram of OID antecedent path model]


It is worth noting that OID’s use of the concept of alumni identity has several similarities to McDearmon’s (2011) application of Stryker’s (1989) role identity theory. Both recognize the interactions between a college and an alumnus/na form a unique relationship, and the context and experiences of each alumnus/na shapes identity. However, an important difference lies in their views on motivations for support. While
role identity theory posits that alumni give because they believe it is what they are expected to do, OID theory argues that they give out of a sense of allegiance. One theory focuses on the cultural expectations, while the other focuses on the personal relationship.

OID has drawn some criticism since its publication. Most notably, Iskhakova et al. (2017) wrote in their literature review on alumni loyalty that it is limited by its perspective. They argued that Mael and Ashforth (1992) approached the topic of alumni loyalty from the business management field, meaning they perceived colleges primarily as business entities. By framing colleges as businesses, there is a danger of only viewing alumni as valuable for economic reasons. They argued that alumni loyalty is a complicated concept that includes aspects of material and nonmaterial, in addition to both behavioral and attitudinal. This criticism is a valuable reminder that while increasing donations is a worthwhile endeavor for colleges, the nonmaterial aspects of alumni loyalty are valuable in their own right. As an example of nonmaterial support, the authors argued that alumni are important sources of feedback on making the educational experience better for current and future students.

An additional criticism pertains to the manner in which Mael and Ashforth (1992) grouped their variables. In their model, organizational support includes dependent variables for both donations and engagement behaviors. The model theorizes that these behaviors are similar and affected in the same ways by individual and organizational antecedents. More recent authors in the field have shown consistently that engagement and donations should be considered separately (Kroll, 2014), and that engagement activities are significant predictors of donations (Bruggink & Siddiqui, 1995; Drezner & Garvey, 2016; Hunter et al., 1999; Mosser, 1993).
Finally, Mael and Ashforth’s (1992) method of measuring donations is problematic. In their study, respondents were asked to rank the school as a priority for their philanthropic contributions (1 = the school is my highest priority, 5 = do not contribute at all). There were significant problems with using this outcome measure. First, the scale did not have acceptable answer delineations. Moving from a “5” to a “4” on the survey indicates donor status, but the other differences measured priority on a Likert scale. The authors treated the differences between items the same in their regression, leading to potential measurement error. Second, Dillon (2017) found alumni overestimated their philanthropy in surveys compared to college records. This finding casts further doubt on the Mael and Ashforth (1992) Likert scale method, and self-reporting of donations in general, as a measure of philanthropy. This belief is so widely accepted that the consultants who designed the alumni attitudinal survey in Appendix A did not include donation priority as a question and relied on the college records for donation measurements. They included a ranked priority question dealing with affiliation for survey item six, “Which of these statements best describes how XX fits in your life today? It is: One of the most important affiliations in your life today; Important to you, but other affiliations are more important in your life today; Not among the affiliations that are important in your life today.” They also included a question asking non-current donors if they gave to other organizations. It is important to note the difference between the two methods for measuring behaviors and the shortcomings associated with the Mael and Ashforth (1992) method.

In a justification for using this measure of donations, Mael and Ashforth (1992) stated total giving was not an acceptable measure due to capacity’s effect. This is an
important consideration supported by other studies (Mosser, 1993; Thompson, 2010). However, it is possible to control for capacity by including an income estimation, along with other variables such as class year, race, academic major, and marital status that are believed to be associated with capacity. Total giving is also relevant on a practical level, as many advancement offices use it as their primary gauge of success.

Mael and Ashforth (1992) did not use this study’s other measure, number of gifts, as an outcome variable due to “differing preferences towards lump-sum versus staggered contributions” (p. 111). While this concern is valid, recurring gifts are preferred over lump sums by many advancement practitioners because they are positive established habits rather than one-time actions. This belief fits with continuity theory, which states once an action becomes a habit, it is likely to continue (Atchley, 1989). Although the same amount of money may be given in both lump-sum and staggered scenarios, the recurring gift is viewed more favorably due to its implied association with future giving. This relevance provides further justification for measuring the number of gifts in philanthropic research. However, Mael and Ashforth’s (1992) criticism of the measure emphasizes the clarification that the variable measures donation occurrences, regardless of size. It further indicates the formation of giving habits rather than only monetary increases, which is still a positive outcome.

**Significance of the Study**

The results of this study have significance for both scholars and practitioners. For scholars, the application of OID theory using SEM can illuminate the complex nature of these relationships in a visual way that aids in understanding donor motivations. By testing three methods of donations, it also showed how these relationships differ in the
various contexts. The analysis also applies quantitative methods to the psychological construct of alumni identity, thereby providing a powerful example of how the theory’s equation is enacted in practice. For practitioners, the results provide a visual reference for how alumni interact with their college and approach donation decisions. This understanding aids in the crafting of solicitation methods, the structuring of long-term engagement programs, and the understanding of the beliefs that form the foundational structure of alumni identity. Most importantly, the results aid in the efforts by colleges to leverage their relationships and provide more tools to accurately predict a graduate’s inclination to donate more effectively.

Definition of Terms

The following terms have been operationalized for this study.

*Alumni*—A group of graduates of a college or university.

*Alumnus/na*—A graduate of a college or university.

*Alumni Attribute*—Any piece of quantifiable evidence about a graduate of the school.

*Antecedent*—A characteristic of either the individual or the college that is believed to precede the development of OID (Mael & Ashforth, 1992).

*Alumni Donors*—Alumni who have given any amount of money (unrelated to tuition) since graduating from their alma mater.

*Alumni Engagement*—The participation of alumni in measurable activities provided by the college. Examples include event attendance, volunteering, interacting with college entities digitally, or being the parent of a student or alumnus/na.

*Alumni Identity*—A latent construct derived from survey factors meant to represent connectedness and organizational identity (OID) (Mael & Ashforth, 1992).
**Areas of Significant Programming**—A term used to denote areas in the United States where the college has regular alumni events and outreach. The areas are defined by the Core Based Statistical Area standards of the Office of Management and Budget. Cities include New York City, Washington, D.C., Boston, Chicago, Minneapolis, Denver, Colorado Springs, San Francisco, Seattle, and Los Angeles (Donovan, 2015).

**Cumulative Lifetime Giving**—The total amount given by alumnus/na during their lifetime.

**Donor Status**—The indication that an alumnus/na has given a monetary donation at any point in their post-graduate life.

**Fundraising**—The art and science of seeking financial support for an organization, in the case of this study, for a college or university.

**Higher Education**—An industry comprised of colleges and universities that grant undergraduate and graduate degrees.

**Liberal Arts College**—A primarily undergraduate higher education institution that focuses its primary curriculum on academic subjects distinct from professional and technical subjects. Common academic focus subjects include literature, philosophy, mathematics, and social and physical sciences.

**Organizational Identity (OID) Theory**—A theory that argues individuals support an organization (college) prompted by both organizational and individual characteristics. It further states that identity is an individual’s connected state of seeing the organization’s successes and failures as one’s own (Mael & Ashforth, 1992).
Organizational Support—The act of giving back to the organization (college) in a meaningful way. The most common and widely studied form of support is monetary donations, but it also can refer to acts of service such as volunteering or referring new students (Mael & Ashforth, 1992).

Predictor Variable—A quantitative variable that has a statistically significant relationship with an outcome variable.

Structural Equation Modeling (SEM)—A quantitative research method that simultaneously models regressions and latent constructs occurring in the same theoretical system (Mosser, 1993).

Summary

Chapter I of this dissertation presented the research problem. At this crucial stage in the history of higher education, it is more important than ever for colleges to achieve financial stability by leveraging their alumni relationships into monetary donations. By focusing on behaviors that form effective engagement, the beliefs that form alumni identity, and their relationships to one another and the inclination to donate, the study provided the clearest picture yet of these complicated relationships. The study used a SEM with data derived from an alumni survey and college records. The model was composed of the constructs of alumni identity and engagement predicting donations while controlling for demographic factors. Mael and Ashforth (1992) identified that alumni connectedness drives supportive behaviors, but their investigation fell short by not fully analyzing the potential for alumni engagement to be used as a distinct predictor of OID and donations. This study showed its relevance as a predictor of giving and tests that relationship to gain a better understanding for both scholars and practitioners.
CHAPTER II
LITERATURE REVIEW

Restatement of the Problem

Colleges and universities are increasingly becoming more dependent on fundraising efforts to achieve long-term financial stability, as government funding and tuition support can be volatile (Dillon, 2017; Horn, 2018; Lasher & Cook, 1996). The scholarly field of alumni fundraising has been addressing issues of donor motivation and engagement for decades, but much is unknown about alumni-college giving relationships. In addition, little consensus on donor motivations exists with many competing theories, offering differing views on the ways in which beliefs, experiences, and engagement behaviors relate to institutional support (Drezner & Huehls, 2014). This study seeks to contribute to the body of knowledge by utilizing a versatile statistical method, SEM, and applies it to a wealth of alumni data from a single college. The purpose of the study is to ascertain the relationship between the alumni identity, engagement behaviors, and institutional support in the form of donations. By doing so, the study tests both the strength and pattern of this model using Mael and Ashforth’s (1992) OID theory as a framework. This study also tests three measures of donations to ascertain the differences in the relationships in the various contexts.

Overview

The purpose of this literature review is to provide background on important concepts used in the research. It additionally details the history of higher education alumni engagement and fundraising. This chapter includes explanations of the major schools of thought on the reasons alumni give back to their alma maters, including a
focus on identity-based motivations. It also provides an overview of related prediction studies and the factors found to be significant. Finally, it discusses SEM and its application to the field.

**Historical Background**

According to the Council for Advancement and Support of Education (CASE) (2017a), the practice that today is known as “alumni relations” has been around in some form for over 200 years. In 1792, Yale University began the practice of organizing graduating alumni by class and entrusted class secretaries with creating biographical summaries of the graduates. The nation’s first official alumni association formed in 1821 from graduates of Williams College (CASE, 2017b). By 1913, alumni groups were common enough that 23 professional and volunteer alumni secretaries assembled in Ohio to form the Association of Alumni Secretaries, the first trade group of its kind (Keane, 1988). Yale University continued to spearhead the alumni movement by being the first to institutionalize regular reunions in 1824, the first to organize an annual giving campaign in 1890, and one of the first to publish a regular alumni magazine under the Alumni Magazines Associated organization. These practices are currently common at higher education institutions across the country (CASE, 2017a). As a barometer of the field’s evolution, CASE, the institutional advancement industry’s predominant professional association, has over 3,600 member institutions in 82 countries around the globe (CASE, 2017b).

Today, many alumni relations offices fall under the departmental purview of advancement divisions, including the site of this study. The overarching goals of advancement operations are to cultivate relationships and to motivate key constituents of
a college to give voluntary support (Drezner & Huehls, 2014). Thus, while constituent affinity is valuable in its own right, an explicit charge exists to turn those positive feelings into tangible support. Of these constituents, alumni comprise a large emphasis, both in terms of quantity of active constituents and the number of staff dedicated to fostering relationships. In terms of fundraising, alumni contributed 24.2% ($9.93 billion) of 2016 higher education giving amounts, second only to foundations at 30.4% ($12.45 billion) (CAE, 2017). It is worth noting that while foundations are counted separately, many of those donations are from alumni-connected organizations or alumni foundations, underscoring the importance of alumni in advancement work. All these facts demonstrate the consensus that leveraging alumni relationships more effectively has the potential to increase donation amounts (Dillon, 2017; Drezner & Huehls, 2014).

The work of connecting alumni to the college is highly subjective, but three objective industry metrics of a “successful” alumni relations program include the number of donors, the number of event attendees, and the number of alumni volunteers as a percentage of their total alumni population (Kroll, 2014). Volunteer and event attendance levels, in particular, are especially important, given that these experiences provide alumni with a more direct interaction with the college. These types of engagement activities have been shown to have a positive relationship with OID (Mael & Ashforth, 1992).

Leveraging alumni relationships more effectively has the potential to increase donation amounts (Dillon, 2017).

**Relevant Theories**

While Mael and Ashforth’s (1992) OID theory was deemed most appropriate for this study, it is worth noting the other mainstream theories and their criticisms. Within the
realm of higher education specifically, this review focuses on four additional groups of theories: altruism-based philanthropy models, exchange theories, role identity theory, and identity-based motivations.

**Altruism-Based Philanthropy Models**

At the heart of the discussion of donor motivation is a simple, yet controversial question. Does donor altruism exist? This question is the starting point for most of the major giving theories and, additionally, can guide practitioner solicitation. It is worth considering whether donors fundamentally give out of a selfless need to make the world better, or to get something in return, either tangible or intangible (Drezner & Huehls, 2014). For example, impact philanthropy theory draws upon a philosophical assumption that altruism exists and that donors are motivated in their gifts with the utilitarian frame to do the most good (Duncan, 2004). This theory is sometimes associated with venture philanthropy because it often refers to project-based endeavors in which expertise is also donated to build organizational capacity. Nonetheless, it inherently posits that people give based on impact rather than on self-interest (Drezner & Huehls, 2014).

Impact philanthropy is related to several other similar theories that approach the subject from slightly different perspectives. From an economics perspective, this idea is embodied in the public good model. According to Roberts (1984), altruism is “the case where the level of consumption of one individual enters the utility function of the other” (p. 137). In the public good model, by donating money individuals disregard their own self-interest (in the economic sense) to benefit someone else. Viewed through a social justice perspective, justice motivation theory draws upon the concept of altruism to suggest people donate to fix what they see as an injustice (Miller, 1977). Warren and
Walker (1991) posited when donors see evidence that might contradict their belief in a just world, they are motivated to restore this concept, with the strong caveat that they give only if they believe their donation will be of real and permanent help.

Finally, as an example from a psychology/sociology perspective, prosocial behavior theory argues the motivation to give is based on the need to help others (Bentley & Nissan, 1996). The theory was developed by biologist Edward Wilson in his broader writing on the concept of sociobiology. Since prosocial behaviors can be found in a variety of animals, as well as humans, many proponents contend that this motivation is inherent and biological (Wilson, 1975). However, there is also evidence that this behavior can be nurtured and learned, and ample evidence can be found in the realm of higher education fundraising of colleges nurturing prosocial donor motivations (Drezner & Huehls, 2014). It is important to note that proponents of this theory do not associate it with altruism, but its focus on benefiting the gift recipients rather than the donor shows a strong connection to the previous theories.

Exchange Theories

In direct opposition to altruism-based theories of donor motivations, social exchange theory and its related perspectives argue that altruism is not present in the decision to give. While altruism theories include evidence of donors reporting various motivations related to impact, other researchers have been critical of this view and argue that the impact on the donor (not the recipient) is the true motivation of philanthropy (Drezner & Huehls, 2014). Blau (1964) argued that voluntary actions (including donations) are motivated by the personal outcomes of those actions. These benefits could either be tangible or intangible. Evidence of tangible benefits in alumni fundraising could
involve special donor benefits such as thank you gifts, a tax benefit, or naming rights to a building. While these tangible returns are straightforward, social exchange proponents place more emphasis on the intangible donor benefits of philanthropy. These benefits are primarily internal, such as a feeling of satisfaction. However, the most powerful of these intangible benefits is the perceived elevation in social status (Blau, 1964). Kelly’s (1991) model of social exchange was used in the college fundraising context by Lasher and Cook (1996). They found it to be very present in the ways that advancement and administration professionals engaged donors. Their methods of solicitation often involved aligning the donors’ interests with activities at the college and seeking to provide the most benefit to the donors in exchange for their gifts.

As with the altruism-based theories, similar concepts related to social exchange theory exist in other disciplines. In economics, Becker’s (1974, 1976) theory of rational utilitarianism is based on the concept that true altruism does not exist, and donors can be motivated by the peer effects of others and the need for social acclaim. Andreoni (1989) expanded on this view with warm effect theory, which argues that personal utility is a motivator, and the “warm glow” associated with donating, while intangible, is highly valuable. While these theories focus on expected benefits, the opposite may also be true. The sense of obligation, or giving because of benefits already received, is believed to be present in donor motivations, as Sugden’s (1984) reciprocity theory suggests. As an example of this theory in the higher education context, an alumnus may give to a scholarship fund because they benefited from a similar fund and have a willingness to pay back the kindness of past donors (Drezner & Huehls, 2014).
As a criticism of exchange models, Piliavin and Charng (1990) argued in a literature review analysis that there is sufficient evidence of altruism in action, even if it is not always present. While selflessness may not always be the donor’s motivation, it may at times be or is a component of the motivation. In regard to social exchange models that rely on social benefits, Schervish and Havens (1997) argued that while peer motivations undoubtedly exist, altruism may be present collectively in “mutual self-interest” or “multi-person altruism” (p. 237). However, they also argued personal self-interest is often the primary motivator. Simmons (1991) further stated that helping acts remain admirable even when inspired by subtle self-rewards, such as the desire for one's life to matter, to improve one's self-picture, to feel happier about life and self, to relieve the distress of empathy with the victim, or to obey religious and societal norms.

**Role Identity Theory**

As Simmons (1991) mentioned in her analysis of altruism, the need to obey societal norms can be a powerful motivation. Evidence of this exists in higher education fundraising (Dillon, 2017). This motivation was argued in Stryker’s (1968, 1980) role identity theory, which states the social concept of self is constituted by society. Further, individual behaviors are motivated by the need to fit a perceived role, and individuals placed into socially recognizable positions will likely fulfill the social expectations of those positions (Stryker, 1968). This can be seen when individuals appointed to new positions change their behaviors to fit the implied role. Turner (2001) expanded on this theory by stating that a role is “a cluster of behaviors and attitudes that are thought to belong together” (p. 233). An individual may inhabit several (sometimes contradictory)
roles simultaneously, but they are primarily guided by their current context for social norms and behaviors (Stryker, 1980).

Dillon (2017) applied this concept to alumni fundraising by stating that the position of an “alumnus/na” has an inherent social expectation of donations, and alumni donate primarily because they are expected to do so by their community. A criticism around this theory is that it does not take into account the multitude of previously mentioned motivations that are undoubtedly at play. Additionally, if the role of an alumnus/na includes giving expectations, undoubtedly a logical source of those expectations should exist. While some school personnel may make efforts to set expectations early in the college relationship, little evidence can be found that this expectation is uniform and powerful enough to describe the thousands of U.S. institutions.

Finally, in Dillon’s (2017) alumni survey analysis using role identity theory, he contended that role identity is the primary alumni donation motivator, even though the analysis showed that donor status was not significant in predicting scores of alumni role identity. If role identity was such a primary motivation, it would be expected that a natural correlation would occur because all contactable alumni are often regularly solicited by colleges on at least an annual basis. While this major study did show some limitations of the theory, it advanced the field in a crucial way. The study correctly grouped donation antecedents into three distinct groups: demographics (race, gender, income, etc.); behaviors (volunteering, event attendance, social media, etc.); and beliefs (satisfaction, sentimentality, connection, etc.). By doing so, the study clarified that self-
concept in relation to the college is an important independent component of the giving equation.

**Identity-Based Motivations**

An individual’s decision to donate to his/her alma mater is a complicated and personal choice. The individual’s personal connection and a sense of allegiance to the school should be considered when examining donor motivation. Colleges have a relatively unique fundraising model compared to other nonprofit organizations that confound the traditional idea of a donor relationship. For example, alumni have already engaged in a transactional relationship with their college as students, sometimes paying large sums of money for tuition, room, board, and associated costs. This financial relationship makes the proposition of paying additional donations unusual, especially since the primary benefits of the educational experience have already been delivered. Thus, it is clear many alumni have such a strong connection to the school that they decide to give additional money.

In terms of leveraging alumni relationships for the purposes of fundraising, a wealth of qualitative research exists to shape understanding on the way in which identity serves as a motivator. Oysterman (2007) developed an identity-based motivation (IBM) model that argues actions are most natural when they align with the individual’s identity and are within context. Aaker and Akutsu (2009) expanded on IBM in philanthropy by claiming identity saliency in the realms of familial, community, or personal identity are key drivers of donations. This behavior is often seen in earmarking gifts, such as when alumni donate funds for a sport they played as a student, guaranteeing the impact will be on students similar to them.
While Mael and Ashforth (1992) used alumni identity in general as the main motivator, qualitative research has further explored identity-based motivations among these identity communities that exist within the college, such as those among marginalized groups, including those based on alumni of color, gender, sexual orientation, and ability (Drezner & Huehls, 2014). For example, Gasman (2002) found African American alumni are often ignored by advancement offices, and their motivations in higher educational settings often are focused on racial uplift, or the need to use their gift to the college as part of a larger effort to advance their racial community. Gasman argues that this motivation is notably different than those observed in the White community, and traditional fundraising tactics are not addressing this motivation or this community.

Similarly, Drezner and Garvey (2016) found in a study of LGBTQ alumni that their giving was affected by their perception of their student experience and the campus climate of inclusiveness. They also found involvement in identity-based affinity groups for LGBTQ alumni positively affected their relationship to the college and the motivation to give. Most notably, while the alumni in their study did not directly cite identity as a giving motivation, the authors argue that it played a role unconsciously.

**Significant Donation Predictors**

Quantitative studies have also advanced the understanding of donation motivations. Weerts (2007) found most academic publications on alumni donations focus on four areas: research into individual donor characteristics, fundraising practices, the external environment, and institutional characteristics. The proceeding sections focus on summarizing what other researchers have found to be significant predictors of giving,
particularly from the wealth of regression-based prediction studies that have identified significant predictors.

**Fundraising Practices**

While most of the material thus far has covered individual aspects of donor motivations, it is worth noting the college’s effect on these relationships, particularly relative to advancement practices. Harrison (1995) used a regression method to predict donor status with fundraising investment data from 18 colleges. The study used CASE financial data from three fiscal years and analyzed the relationships between giving data, fundraising expenditures, and institutional traits. The study’s general finding was not surprising. The more money schools invested in fundraising, the more money they gained in return. However, an additional finding that is particularly relevant to this study is that investment in alumni relations activities were both significant and powerful in predicting increased donor status among alumni. These findings support the argument that engagement practices have a direct link to financial support, and investment in them by colleges should be seen as ways to bolster donations.

**Economic Factors**

Considerable philanthropic research has focused on how the economy factors into donation decisions, especially concerning income and the financial ability to donate. For example, the impact of taxes and deductibility has been shown to significantly affect donation decisions (Leslie & Ramey, 1988; Seltzer, 2018). Holmes (2009) also found alumni in higher tax brackets living in a state with higher charitable deductions donate more to their alma mater. However, the effect was not observed for lower income alumni,
showing that tax sensitivity is only a considerable factor for those more likely to itemize their deductions.

Additionally, income has continually been observed as a significant predictor of donations, as well as an accurate proxy for the concept of an individual’s ability to donate (Leslie & Ramey, 1988; Weerts & Ronca, 2009). Hernández-Murillo and Roisman (2005) even stated, "Income is by far the most important predictor of giving behavior" (p. 12). However, there is some disagreement over how the dependent variable measure of giving changes the independent variable of income’s predictive power. Van Horn (2002) found that while income is particularly significant in predicting the size of donations, it is less relevant in predicting donor status in general. This finding highlights the importance of using multiple measures of philanthropy (donor status, amount given, and number of gifts) when creating predictive models. In a similar way, marital status is believed to be a significant predictor of donations. This is possibly due to the financial stability associated with marriage, thus creating more disposable income and the ability to donate. Both Belfield and Beney (2000) and Monks (2003) found marital status to be a positive predictor for alumni donations.

**Geographic Distance**

Living closer to the college theoretically supports donor behaviors by providing more opportunities to visit and stay connected with the current state of the institution. Bruggink and Siddiqui (1995) and McDearman and Shirley (2009) both found that geographically closer alumni were more likely to be donors. However, both studies were conducted on public university populations, and a lack of evidence exists that this predictor is generalizable to more widespread alumni populations (Radcliffe, 2011).
Age

Alumni age is commonly viewed as a significant donation predictor because of its perceived relationship to income. As alumni progress in age and in their careers, they likely see their incomes increase as well (Radcliffe, 2011). Estate gifts are also quite common, and at many colleges these pledges are made by older alumni and counted as donations at the time of the pledge, although the money will not tangibly arrive until after death. That being stated, there is continued evidence that age is a significant positive predictor (Hoyt, 2004; Leslie & Ramey, 1988; Thompson, 2010). Mael and Ashforth (1992) also listed it in OID as the antecedent “recentness of membership.” However, they surprisingly listed it as a negative predictor. When they conducted their analysis, the variable was not significant on their measure of giving. They believed an individual’s connection to the organization would fade over time, which may be true, but age’s relationship to income may be transforming it into a positive predictor rather than a negative one.

Racial Identity

Race has a complicated relationship with giving. For example, Thompson (2010) found in a data mining analysis of alumni giving that White alumni gave significantly more (mean cumulative total giving) than other races to their alma mater. However, qualitative scholars such as Drezner and Huehls (2014) and Gasman (2002) suspected race is a significant predictor, not because of race’s effect on connectedness, but due to an inability of colleges to effectively solicit donations from non-White donors. Similarly, the factors may also be affected by the history of racial wealth inequality in the United
States, as well as negative student experiences. As such, race may be a useful control variable in prediction models.

Degree Type

Degree type is seen as a predictor because of its effect on income. For example, students in professional and technically focused degree programs consistently earn higher starting salaries (National Association of Colleges and Employers [NACE], 2018). Similarly, Thompson (2010) found that attaining a Bachelor of Science degree, as well as a joint Arts and Science degree, were significant positive predictors of donations. Blumenfeld and Sartain (1974) also found being an Economics major was a significant predictor of giving. Degree type effectively serves as another measure of ability to give and, thus, can be a useful control variable.

Student Experience

Perhaps the most important characteristics of Mael and Ashforth’s (1992) OID theory deals with how alumni view their student experience, and the proceeding research has justified these claims (Drezner & Huehls, 2014). Gaier (2005) found highly compelling evidence of the importance of satisfaction from a large-scale survey of graduates from a large public university. Not only was there a significant and powerful connection between satisfaction and giving, but also with student involvement. The study showed alumni who participated in a formal activity as students were 87% more likely to be donors. These findings, along with Dillon’s (2017) analysis show the importance of including survey data with indicators for student experience and satisfaction.
Alumni Engagement

As mentioned previously, Mael and Ashforth’s (1992) OID theory views alumni engagement behaviors, such as event attendance and volunteering, as dependent variables representing organizational support. However, overwhelming evidence exists for these behaviors to be seen as significant predictors of OID and giving (Drezner & Huehls, 2014; Hunter et al., 1999). Wunnava and Lauze (2001) found in a study of Middlebury College’s giving records over 23 years that significant predictors of alumni giving were as follows: volunteering for the college, residence in states with alumni chapters, existence of relatives who are alumni. Similarly, Thompson (2010) found in a large-scale donation records analysis of eight colleges that formal participation in alumni associations and more informal information sharing were significant predictors of alumni giving. While Mael and Ashforth (1992) did find evidence that these behaviors may be effected by OID and the supporting antecedents, the use of alumni engagement as a predictor shows the value of using them in a dual role of being affected by, but also affecting, OID.

Structural Equation Modeling (SEM)

While most of the previous studies have used straightforward regression techniques, it is worth noting SEM’s particular relevance to this field of study. Mosser’s (1993) study on predicting alumni giving behavior is the only available example of SEM modeling involving alumni giving. He utilized a massive survey dataset of 110,000 alumni at the University of Michigan. While the study was used effectively to predict key indicators of alumni giving (willingness, capacity, and academic integration), the study utilized no variables related to engagement or latent constructs related to identity. The
author also concluded that while the study was helpful in determining capacity’s mediating relationship to donor motivations, there are many other factors that he was not able to take into account. Since then, there has been a continued literature gap and need for SEM use in alumni fundraising. Heckman and Guskey (1998) even called for its use in future research in their study using a path analysis. They applied the economics-based discretionary collaborative behavior theory to an alumni survey. The path analysis was helpful in visualizing the relationships, and they provided evidence for the importance of alumni-college giving relationships, while framing it instead as a customer-business relationship. Most notably, rather than using donations as the primary dependent variable, they used a scale variable that counted up to 20 positive behaviors, weighting donor status (occurrence of any gift) equally with acts such as hiring an intern or volunteering with admissions.

Summary

The wealth of relevant donation literature indicates the decision to donate money is complicated and personal in nature. Additionally, it should be clear that the motivations of alumni donors are inherently unique in the world of philanthropy. While universal notions of achieving impact and social exchange have been observed, the identifications of alumni with their alma mater are undoubtedly present and significant. This sense of identification connects alumni to the college to the extent that they experience the college’s successes and failures as their own. The literature also has shown this concept is an independent component of the donor motivation process. The other two key groups in the process include behaviors in the form of engagement
activities and demographics in the form of significant predictors inherent to the individual, such as race, income, and location.

While the preceding studies are helpful in providing findings on donor motivations, there is still a need for a more in-depth understanding of the relationship between engagement behaviors, the concept of alumni identity, and the outcome of institutional support through donations. As donor motivations are complicated and primarily involve finding measurable predictors of future behavior, straightforward regression models have been the primary method for quantitative studies (McDearmon, 2011; Thompson, 2010; Wunnava & Lauze, 2001). The consistent problem with the application of this methodology is that these studies usually focused solely on either attitudes (satisfaction, sentimentality, and connection) or behaviors (events, volunteering, and student involvement). Both categories are associated with donor status, but a unique literature gap exists in the need to analyze and map the relationship between all three (engagement, identity, and donations) in one model while controlling for demographics. Specifically, the use of SEM methodologies is needed to utilize the application of regression correlations in a complex model that considers several sources of data on the same sample of alumni. Doing so furthers the understanding of this complex relationship using Mael and Ashforth’s (1992) OID theory, with the notable change of including engagement behaviors as both forms of support and donation predictors.
CHAPTER III

METHODOLOGY

Restatement of the Purpose

This chapter presents the methodology and procedures of the research. A description of the survey instrument, the other data, the sample, and the methods of analysis is included. This study was designed to map and analyze the alumni-college giving relationship. Specifically, the following research questions guided the study:

1. What is the nature of the relationships between engagement behaviors, alumni identity, and donations?

2. Do the relationships follow Mael and Ashforth’s (1992) OID framework?

Research Design

This study employed a quantitative analysis that involved SEM to analyze data from a self-report survey of college alumni and the college’s alumni database. The SEM methodology is ideal because it is designed to test the true nature of the alumni-college giving relationship. The model used is what Byrne (2010) calls a measurement SEM, as opposed to a structural model, because it involves both observed and unobserved constructs. The model is also recursive because there are no feedback loops. The research was conducted in two overarching steps. The first was to analyze the survey data to find the best numerical representation of alumni identity. The same procedure was carried out on the college’s records to find suitable variables to form the latent construct of engagement. Reliability analysis procedures were performed to ensure the individual items suspected to form the latent variables of alumni identity and engagement were acceptable for the model. The next step involved the use of SEM to map the relationships.
between the variables. The model provided an effective way to visualize how the three concepts of engagement, identity, and donations relate to one another, while controlling for a variety of factors. The variables were categorized as multiple factors in four groups: donations, alumni identity, engagement behaviors, and demographics/control variables.

**Research Setting**

The setting was a small liberal arts college in the Western United States. The school is selective (15% acceptance rate in 2018) with a student body of approximately 2,200 and an estimated living alumni population of approximately 30,000. The college has a distinctive academic curriculum in which students take classes one at a time for three and a half weeks, for a total of eight classes per academic year. The college focuses primarily on undergraduate liberal arts education, with only one master’s program in teaching. The college offers 41 undergraduate majors, 27 traditional minors, and 31 thematic minors that emphasize interdisciplinary studies. The top three most popular majors are Economics, Biology, and Sociology. The majority of graduates go on to pursue advanced degrees. Over half (53%) of alumni were either enrolled or completed an advanced degree by five years after graduation.

The college is the only selective, private liberal arts college in its immediate region, and it is a member of the Associated Colleges of the Midwest (ACM). Its campus lies in an urban setting. The college is in a relatively sound financial situation with an endowment of approximately $765 million ($363,000 per student). The campus reflects this state with several new or newly renovated buildings, including a large recreation center, performing arts hall, fine arts museum, and a state-of-the-art library, which is the largest carbon neutral academic library in the United States. The campus is primarily
residential, with 78% of students living on campus. The average class size is 15, with a student-faculty-ratio of 10:1. The college has a strong first-year retention rate of 96%, with a four-year graduation rate of 82%.

The student body consists of 64% White students. The races and ethnic groups self-identified by students of color are 15% Asian, 9% Hispanic, 5% African American, 2% Native American, and <1% Native Hawaiian/Pacific Islander. These statistics include some double counting due to those with two or more races identified. International students make up 8% of the population. The surrounding city is 78% White according to the 2010 census. Its international students come from over 50 countries, with the largest population from China (110 students in 2018). The tuition cost for the 2019-2020 school year is $57,612, with a total estimated cost of $74,760 for residential students. The tuition cost has risen by at least 3% every year since 2010. While the listed cost of attendance is high, the average net price is $28,390 per year due to the various forms of aid. Half of current students receive financial aid, and 12% receive Pell grants. The college’s sizable endowment ensures that even students paying the full tuition price are partially subsidized and receive services valued at more than their cost. The largest group of students is from the East Coast, with 28%.

The college is in the midst of a large capital campaign, providing additional relevance for a study examining the relationships between beliefs and behaviors of alumni. The school has two Division I sports programs, men’s hockey and women’s soccer, and disbanded its Division III football program in 2008. The college holds regular alumni events across the country in major cities and maintains several alumni volunteer programs. The college currently includes 55 full-time employees in its advancement
division. The alumni office utilizes a number of volunteer/engagement opportunities, including reunion committees, advisory boards, career center volunteering, nationwide events, and an online mentoring community.

The college population is ideal for an examination of OID because it objectively rates highly in all four organizational antecedents in OID theory: distinctiveness, prestige, intercollege competition, and low intra-organizational competition. It is distinctive due to its curriculum and unique geographic location. It is prestigious in the sense of having highly selective admission practices. While the college is not known primarily for athletics, it has a notable Division I sports rivalry contributing to intercollege competition. The college’s small size also limits the potential for intra-college competition. Students have more opportunities to interact with others outside their academic major, and the vast majority of official reunions are organized around class cohorts instead of disciplines. The college is also ideal because it matches the type of college (small private institution) Mael and Ashforth (1992) used in their study. Mael and Ashforth felt that the use of such a college was ideal for research because it was what Whetten (2006) describes as a holographic organization (where organizational members share a common identity) rather than an idiographic organization (where subunit-specific identities are prominent).

Population and Sample

The population for the study was derived from those who participated in a college survey in the fall of 2018. The sample size for the survey was 1,922 (1,777 completed it and 145 answered some of the questions). The survey was conducted by a third party, eAdvancement, a consortium of independent consultants in alumni relations,
communications, and fundraising (eAdvancement, 2018). The survey was emailed to a representative sample of 7,823 alumni, resulting in a 25% response rate. The study was commissioned by the college’s advancement division, and permission was granted from both the college and the survey authors to use it for this research. In addition to the report, the raw data with identification numbers were available. This level of data allowed for the matching of survey responses to engagement and giving behaviors. The list of survey questions used in the study and the percentages for each answer are provided in Appendix A. The demographic breakdown is provided in Table 1, with comparisons to the demographics of the entire alumni population.

Table 1

Location, Gender, Graduation Years, and Donor Status of the Survey Respondents

<table>
<thead>
<tr>
<th></th>
<th>Actual Population</th>
<th>Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metro areas near the college</td>
<td>18%</td>
<td>23%</td>
</tr>
<tr>
<td>Areas of significant programming</td>
<td>22%</td>
<td>29%</td>
</tr>
<tr>
<td>Everywhere else</td>
<td>60%</td>
<td>48%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>52%</td>
</tr>
<tr>
<td>Male</td>
<td>50%</td>
<td>48%</td>
</tr>
<tr>
<td>Graduation Years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010-2017</td>
<td>14%</td>
<td>17%</td>
</tr>
<tr>
<td>2000-2009</td>
<td>17%</td>
<td>21%</td>
</tr>
<tr>
<td>1990-1999</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>1980-1989</td>
<td>15%</td>
<td>19%</td>
</tr>
<tr>
<td>1960-1979</td>
<td>21%</td>
<td>24%</td>
</tr>
<tr>
<td>Donors (prior three fiscal years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donors</td>
<td>31%</td>
<td>36%</td>
</tr>
<tr>
<td>Non-donors</td>
<td>69%</td>
<td>64%</td>
</tr>
</tbody>
</table>
Instrumentation

Alumni Survey

The survey consisted of 28 question groupings with additional follow-up questions depending on the answers. The questions were derived to measure a range of alumni opinions about the college, including communications, activities, and donor motivations. Several questions were designed to measure concepts related to alumni identity, those items were composed of three components: student experience satisfaction, current sentiments on the college, and positionality as a member of the community. This study used 12 of these questions (Appendix A). The majority of the questions used a Likert scale, including those believed to be associated with alumni identity. For example, alumni rated their overall feelings about the college on a scale of 1 to 5, with 1 being very dissatisfied and 5 being very satisfied. In another example, the alumni were asked how much pride they have in their college affiliation. That particular question used a four-item scale with 1 being not at all and 4 being a great deal.

The survey consultants provided the college with net promoter scores using the question, “If you were asked, how likely would you be to recommend the college to a prospective student of your own interests and background?” using a scale of 0 to 10, 0 being not at all and 10 being highly likely. The net promoter score concept was developed by Fred Reichheld, and it categorizes Likert scale questions into three groups: promoters, passives, and detractors. Promoters are loyal and enthusiastic supporters, passives are satisfied but unenthusiastic, and detractors are unhappy constituents who could cause harm to the brand (Reichheld & Markey, 2011). The groupings for the net promoter question were 9-10 (promoters), 7-8 (passives), and 0-6 (detractors).
alumni sample consisted of 56% promoters, 26% passives, and 18% detractors. This grouping system was analyzed alongside the traditional Likert scale data to determine its significance in measuring the latent concept of alumni identity. While the question was meant to be grouped into the three scales by the survey authors, it was left as an 11-point scale item for this study to allow for more variance. The 12 questions were selected based on their relevance to three concepts believed to be associated with alumni identity: student experience satisfaction, current sentiments on college actions, and positionality as a member of the community. The Cronbach’s alpha for the 12 questions was .842, indicating that the items are reliable in forming the construct (Field, 2013).

The survey was administered online from October 16 to November 8, 2018, with a random sample of bachelor’s degree holders from 1960-2017. The response rate was 25%. Current students, current employees, current and former members of the Board of Trustees, alumni who have only a master’s degree from the college, and those flagged for no contact or no email were excluded from the survey. The survey was designed to take approximately eight to nine minutes. The subjects were assured in the email invitation that all information would remain confidential and participation was voluntary. In keeping with that agreement, all data was de-identified by college staff before any research was conducted.

Alumni Profiles

The college collects a large amount of data on alumni, and this study matched the survey results with individual college records. There are four engagement variables that form the alumni engagement construct. The variables were selected based on the criteria of being measurable actions (either one-time or continued) that are believed to either
contribute to OID, be beneficial to the college, or both. These variables included event attendance, which was measured as the number of events attended since graduation minus the average of their peers. Similarly, digital engagement (voting for trustees, submitting updates, signing up for newsletters, and participating in previous surveys) was included because it represented meaningful engagement, especially for alumni living in remote areas without alumni events or the opportunity to return to campus. Volunteering was measured by the number of recorded volunteer services minus the average for their peer group. One additional dichotomous engagement variable of having a child enroll in the college was added because it was included as an example of college support in Mael and Ashforth’s (1992) study, and familial alumni bonds have been shown to predict giving (Wunnava & Lauze, 2001). In the same way that the survey items form the latent construct of alumni identity, so too do the four observed variables form the latent construct of engagement. The Cronbach’s alpha for the four engagement variables is .5, indicating poor correlations between them. While this low of a score would traditionally serve as a hindrance to the model’s reliability, it was deemed acceptable to proceed with the construct, nevertheless. Cronbach’s alpha is intended to test if items, commonly in a instrument or survey, are measuring the same construct (Salkind, 2010). In this context, the four items are variables that come from observable alumni actions that are widely accepted by practitioners and researchers as the metrics to measure engagement (Dillon, 2017; Kroll, 2014; Mael & Ashforth, 1992). Another option to account for the low alpha value would be to model the four variables separately in the SEM. However, it was decided to group them as one construct because they objectively measure engagement, and one of the primary benefits of the SEM is to aid in developing and testing theories
(Mosser, 1993). The use of the engagement construct aids in understanding the underlying theoretical pathways at work, which was a primary goal of this study.

Additional information matched to engagement and survey results came from the college’s donation records. The study used three variables pertaining to giving as dependent variables in the model: donor status, total number of lifetime gifts, and total lifetime donation amounts. Donor status is dichotomous and measured as the occurrence of any donation in alumni post-graduate lives, regardless of the amount. The other two variables were continuous, both measuring lifetime giving, one in terms of the amount of distinct gifts and the other in the total sum of their lifetime giving. Three distinct donation variables were appropriate for this study because previous research has shown that prediction models can vary depending on the measure used (Van Horn, 2002). Similarly, practitioners in advancement operations have viewed these measures as distinct and important. While total amounts are crucial to a college’s financial wellbeing, there is great value in alumni donating recurring gifts on an annual basis, even in small amounts. Colleges also value donor status, in general, as many alumni never make a gift.

**SEM Variables**

The benefit of SEM is to see how concepts relate to one another, while controlling for a wide variety of factors. Therefore, the variables should be seen as multiple factors in four groups: donations, alumni identity, engagement behaviors, and demographics. The dependent variable was based on donations, and the independent variables were the constructs of engagement and alumni identity. Donations were measured in three variables, donor status, number of lifetime gifts, and total giving amounts. The full list of selected variables and measures is included in Table 2.
Table 2

Variables and Measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
</tr>
<tr>
<td>Alumni donations</td>
<td>College records were pulled to measure this variable in three ways:</td>
</tr>
<tr>
<td></td>
<td>donor status (yes or no), total number of lifetime gifts compared to</td>
</tr>
<tr>
<td></td>
<td>peers (continuous), and total lifetime donation amounts compared to</td>
</tr>
<tr>
<td></td>
<td>peers (continuous).</td>
</tr>
<tr>
<td><strong>Both Independent and Dependent Variable</strong></td>
<td></td>
</tr>
<tr>
<td>Alumni identity beliefs</td>
<td>Alumni were asked to rate their feelings about the college and their</td>
</tr>
<tr>
<td></td>
<td>relationship to it. The survey included 12 questions measuring the</td>
</tr>
<tr>
<td></td>
<td>latent concept of alumni identity including 3, 4, 5 and 11-point</td>
</tr>
<tr>
<td></td>
<td>Likert scales. The items to be used are questions 1-7 (including</td>
</tr>
<tr>
<td></td>
<td>sub-questions) listed in Appendix A.</td>
</tr>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
</tr>
<tr>
<td>Alumni engagement behaviors</td>
<td>College records were used to determine whether and when alumni engaged</td>
</tr>
<tr>
<td></td>
<td>in formal activities with the college. These four variables</td>
</tr>
<tr>
<td></td>
<td>include the three continuous variables, event attendance, volunteer</td>
</tr>
<tr>
<td></td>
<td>service, and digital engagement, along with one dichotomous variable</td>
</tr>
<tr>
<td></td>
<td>for having a child enroll.</td>
</tr>
<tr>
<td><strong>Demographic &amp; Control Variables</strong></td>
<td></td>
</tr>
<tr>
<td>Estimated household income</td>
<td>Continuous</td>
</tr>
<tr>
<td>Class year</td>
<td>Continuous</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>0 = Alumni of Color, 1 = White</td>
</tr>
<tr>
<td>Marital status</td>
<td>0 = Single, 1 = Married</td>
</tr>
<tr>
<td>Degree concentration</td>
<td>0 = All others, 1 = STEM Field</td>
</tr>
<tr>
<td>Distance from the college</td>
<td>Continuous</td>
</tr>
</tbody>
</table>
The relevant data for the analysis involved demographic details, including class year, race (if available), marital status, degree concentration, and distance from the college. These factors served as control variables in the model. Only variables cited in OID theory or those found to be significant predictors in previous studies were included. Class year, as a substitute for recentness of membership, was cited in the original theory as a predictor. The others were found to be significant positive predictors in previous studies: marital status (married) (Monks, 2003); race (White) (Thompson, 2010); degree concentration (STEM related major) (Radcliffe, 2011; Thompson, 2010); and geographic distance from the college (living closer) (McDearmon & Shirley, 2009). As another control from an external source, the analysis included an income predictor from Geolytics software that predicts household income based on market research and census data because income has been shown to be a significant positive predictor (Monks, 2003; Schmidt, 2001). The participants estimated income was based on the current address on file with the college.

Missing Data

Some missing data was observed in the survey, as none of the items of interest were required fields. These absences necessitated the need to conduct a missing data analysis. In accordance with best practices for evaluating missing survey data, the analysis ascertained the pattern, as well as the extent of missing data. These results were used to guide both deletion and multiple imputation procedures that addressed the missing data without negatively affecting the model (Schlomer et al., 2010).

First, the sample of 1,922 was reduced to 1,906 due to respondents not answering any of the survey items of interest. This deletion method was performed before any
imputation was considered because the lack of survey response may have led to unreliable imputation results. A missing data analysis was performed to ascertain the extent of the remaining issues. Less than two percent of the survey data was missing, and there was no discernable pattern to those omissions. The demographic variables also had some missing data in the income, race, and marital status variables. Income was only missing .2% of its data, but race was missing 28%, and marital status was missing 13%. Given the large amount of missing data among the demographics, Little’s (1988) test was performed to determine if the missingness was Missing Completely at Random (MCAR). Results indicated the missingness was not MCAR. Thus, deletion methods of addressing missing data would introduce bias in the results. Moreover, the AMOS program used to conduct the SEM requires complete data to run a modification indices analysis, which is a key part of improving model fit. Therefore, the missing data was imputed using a multiple imputation method in AMOS. This method uses a regression to predict the item scores based on the other known variables in the model. The program produced 10 new datasets with imputed data, and the results for the proceeding models are pooled from the 10 models using the imputed data.

Data Analysis

Approach

SEM was used to ascertain the differential effects of factors based on the concepts, including the latent constructs of alumni identity and engagement. The SEM for this study was designed to simultaneously examine the direct and indirect effects of the relationships between donations, beliefs, and engagement behaviors (Byrne, 2010). The alumni identity and engagement variables were latent constructs. As some error was
likely in the survey results and engagement measures from natural variance and atmospheric influences, error terms were included in the model (Blunch, 2008):

\[ X = t + e \]

The symbol, \( X \), is the measured variable, \( t \) is the true score for the latent construct, and \( e \) is representative of error, both systematic and random. To ensure model fit for the observed data, maximum likelihood was used to estimate model parameters, and the variance covariance matrix of the observed variables was analyzed. Chi-square root mean square error of approximation (RMSEA) and the Tucker-Lewis index (TLI) were used to assess model fit. The comparative fit index (CFI) was used to compare the different models and to test for a significant difference based on the factors (Blunch, 2008).

SEM has been utilized effectively in other areas of research for decades and was adopted from path analysis techniques utilized in a variety of fields. Westland (2015) credited a geneticist, Sewall Wright, with developing the statistical concept in the early 20th century to map out complex biological data. Since then, the process has been refined and applied to a variety of fields, with a notable gap in application to alumni fundraising.

**Path Analysis Diagram**

A path analysis diagram (Figure 2) is provided to explain the expected indirect, direct, and total pathways of the variables. This model was based on Mael and Ashforth’s (1992) theory of OID. The authors did not view alumni engagement behaviors as independent variables in the original study, but rather, viewed them as dependent variables under the umbrella of support for the institution. While engagement is likely affected by identity, it should be considered as a predictor variable in this model. Numerous studies have shown the relevance and significance of using engagement as an
independent variable in donation models (Bruggunk & Siddiqui, 1995; Hunter et al., 1999; Mosser, 1993). The model should reflect this understanding in which engagement behaviors cause beliefs that in turn cause increased donations. That being considered, Mael and Ashforth (1992) believed that instead identity affects engagement. The second research question guided the analysis to determine if the proposed model (engagement affecting alumni identity) is more fitting in this context, while acknowledging that a feedback between the two likely exists. Alumni identity is denoted in an ellipse because it represents an unobserved variable. Engagement is also in an ellipse because, while these behaviors are observable, the combined construct of overall engagement is latent. The donations variable is in a rectangle because it is observable and accurately recorded by the college. Circles in the diagram denote error. These error markers are expressed in each survey item and engagement indicator, as well as for the alumni identity and donations constructs to account for error in the prediction models.

As noted earlier, the proposed model differs from OID theory by having engagement affect alumni identity instead of the other way around. It should be noted that the research originally was intended to include the other pathway in the model to reflect OID theory. However, the model did not converge due to a constraint issue, indicating that the results from a non-recursive model with a feedback loop would not be reliable. The resulting study examines the model (Figure 2) without this feedback to ascertain if the results support the claim that engagement should be viewed as a distinct and reliable independent variable in this context.
**Figure 2**

*Path Diagram of Engagement, Alumni Identity, and Donations*

\[ \beta_1 = \text{the direct effect of engagement on alumni identity} \]
\[ \beta_2 = \text{the direct effect of alumni identity on donations} \]
\[ \beta_1 \times \beta_2 = \text{the indirect effect of engagement on donations} \]
\[ \beta_3 = \text{the direct effect of engagement on donations} \]
\[ \beta_3 + (\beta_1 \times \beta_2) = \text{the total effect of engagement on donations} \]

**Note.** \( \beta_1 \) = the direct effect of engagement on alumni identity. \( \beta_2 \) = the direct effect of alumni identity on donations. \( \beta_1 \times \beta_2 \) = the indirect effect of engagement on donations. \( \beta_3 \) = the direct effect of engagement on donations. \( \beta_3 + (\beta_1 \times \beta_2) \) = the total effect of engagement on donations.

**Control Variable Analysis**

Of the three SEM models, none of them had significant estimates for all of the six control variables. Two of the variables, STEM major and estimated income, were not significant in any of the models. This finding was surprising since all six were included in this study because of significance in previous research. To investigate whether they were significant in the context that the previous studies used, the variables were run in ordinary least squares (OLS) linear regressions in SPSS. The variables had varying degrees of significance depending on which of the three outcome variables was used, but all of the
control variables were significant in at least one of the OLS or SEM models. These results indicate the control variables are satisfactory, and the SEM methodology sheds new light on these complicated relationships. The OLS regression tables are provided in Appendix B.

Since the variables were significant in other contexts, but not the in SEM, it was important to ascertain if there were any biases created by the omission of these variables from the SEM models. To accomplish this understanding, the pathway coefficients from the final models were compared to those in the initial proposed model with all the control variables. All the standardized coefficients had less than a .03 change after removing the insignificant control variables. This finding suggested the SEM models were safe from any bias from variable omission.

**Limitations**

It is worth noting the researcher’s positionality as a current employee of the research site. The employment provides a rich understanding of the variables in question and sufficient access to ensure accuracy and comprehensiveness in the data collection. However, it is also a potential limitation in that the perspective may have been skewed. The researcher is employed by the college’s advancement division and worked there for approximately four years at the time of data analysis.

Additionally, there may have been some measurement error from missing data in the engagement variables. For example, event attendance may be flawed if alumni attended college events and were not counted. Some official college activities with suspected links to alumni identity, such as attendance of a sports event, are not recorded by the college. The volunteer records were believed to be more accurate, but the potential
existed for some volunteerism to not be recorded due to administrative error. The records regarding volunteering at the college only go back to 1990, meaning there is error from not including important activities from prior years. Fortunately, 29 years of data were deemed sufficient to provide a comprehensive, although imperfect, reflection of engagement activities. A related limitation is that the Cronbach’s alpha for the engagement construct was deemed poor at .5. The analysis proceeded because the four items are measuring what they are intend to, but it is worth noting this limitation.

The limitations from the survey included a danger of self-selection bias. Alumni who are more involved with the college are more likely to take the time to complete a survey about their feelings. While it is uncertain how detrimental this bias is, the sample is representative in many ways, including the important indicator of current donor status, as measured by three-year giving.

A sizable limitation was that the AMOS program was not able to appropriately test a feedback loop in the model between identity and engagement. Both constructs are suspected to be correlated and predictive of each other. It would have been ideal to fully account for that relationship since OID theory is predicated on engagement being a dependent variable instead of an independent variable. Nonetheless, the proceeding models were able to appropriately test the theory by using engagement as a predictor and observing how that placement affects the construct relationships and the overall results.
The purpose of this study was to visualize and determine the relationship between alumni identification with the college, their engagement with it, and their donation behaviors. This chapter reports the results from the three structural equation models and from procedures to develop the underlying constructs. Tables 3 and 4 provide means and standard deviations for all variables used in the model. Table 3 provides descriptive statistics on the survey questions used to form the latent construct of alumni identity. These results come from the unimputed data. The question labels listed in Table 3 summarize the sentiment of the items. The full item text and results are provided for reference in Appendix A. The items of interest were included because OID theory and prior empirical work suggest they measure alumni identity.

The responses to Question 1, “How satisfied are you overall with your experience as a student at the college?” and Question 7, “If you were asked, how likely would you be to recommend the college to a prospective student of your own interests and background?” indicated a high level of satisfaction among the sample. This result suggested a high level of alumni identity based on individual antecedents that comprise the formation of Mael and Ashforth’s (1992) OID theory. Question 7 was on an 11-point scale and was designed to produce a net promoter score (promoters minus detractors), and that resulted in an overall score of 38%. While the net promoter scoring system reduces an 11-point scale to three (promoters, passives, and detractors), the 11-point scale was used in the analysis to capture more variance in the answers. The lowest scoring question was 4D, “How much do you feel you are still part of the community?” Only
11% of respondent rated this at the highest level, “A great deal,” and 64% rated it either “Only a little” or “Not at all.”

**Table 3**

*Survey Item Descriptive Statistics*

<table>
<thead>
<tr>
<th>Observed Variables</th>
<th>Point Range</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-Satisfaction</td>
<td>1-5</td>
<td>4.71</td>
<td>.61</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Q2-Overall Feelings</td>
<td>1-5</td>
<td>4.36</td>
<td>.92</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Q3-Change of Feelings</td>
<td>1-3</td>
<td>1.98</td>
<td>.60</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Q4A-Pride</td>
<td>1-4</td>
<td>3.49</td>
<td>.54</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q4B-Appreciation</td>
<td>1-4</td>
<td>3.72</td>
<td>.54</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q4C-Emotional Connection</td>
<td>1-4</td>
<td>3.17</td>
<td>.83</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q4D-Community</td>
<td>1-4</td>
<td>2.42</td>
<td>.89</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q4E-Maintain Relationship</td>
<td>1-4</td>
<td>3.09</td>
<td>.81</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q4F-Values Alumni</td>
<td>1-4</td>
<td>3.2</td>
<td>.76</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Q5-Engagement Level</td>
<td>1-3</td>
<td>2.24</td>
<td>.50</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Q6-Affiliation Ranking</td>
<td>1-3</td>
<td>1.91</td>
<td>.60</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Q7-Net Promoter</td>
<td>0-10</td>
<td>8.39</td>
<td>2.188</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

Table 4 provides descriptive statistics on all other variables used in the model, prior to imputation. These included four measures of engagement, three measures of donation behaviors, and six demographic variables that have been found to predict donations in previous research.
Table 4

Non-Survey Item Descriptive Statistics

<table>
<thead>
<tr>
<th>Observed Variable</th>
<th>SEM Category</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event attendance compared to peers</td>
<td>Engagement</td>
<td>-1.45</td>
<td>5.52</td>
<td>-15</td>
<td>62</td>
</tr>
<tr>
<td>Volunteer activities compared to peers</td>
<td>Engagement</td>
<td>-1.03</td>
<td>.1.31</td>
<td>-3</td>
<td>7</td>
</tr>
<tr>
<td>Digital engagement</td>
<td>Engagement</td>
<td>6.12</td>
<td>3.52</td>
<td>0</td>
<td>26</td>
</tr>
<tr>
<td>Parent of student</td>
<td>Engagement</td>
<td>.07</td>
<td>.26</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Lifetime donor status</td>
<td>Donations</td>
<td>.93</td>
<td>.25</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Number of gifts compared to peers</td>
<td>Donations</td>
<td>-.88</td>
<td>17.89</td>
<td>-35</td>
<td>322</td>
</tr>
<tr>
<td>Total given compared to peers</td>
<td>Donations</td>
<td>-283.85</td>
<td>55062.61</td>
<td>-51759.4</td>
<td>1594900.4</td>
</tr>
<tr>
<td>Race (White)</td>
<td>Controls</td>
<td>.87</td>
<td>.33</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Class year</td>
<td>Controls</td>
<td>1989.79</td>
<td>15.91</td>
<td>1960</td>
<td>2017</td>
</tr>
<tr>
<td>Estimated annual income</td>
<td>Controls</td>
<td>85,756.11</td>
<td>48,006.97</td>
<td>7968</td>
<td>298489</td>
</tr>
<tr>
<td>STEM major</td>
<td>Controls</td>
<td>.30</td>
<td>.46</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Distance from college (miles)</td>
<td>Controls</td>
<td>1,831.47</td>
<td>1,819.87</td>
<td>75.87</td>
<td>8,356.33</td>
</tr>
<tr>
<td>Married</td>
<td>Controls</td>
<td>.70</td>
<td>.46</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

As stated earlier, the models required some of the engagement and donation variables to be altered to reflect their positionality to their peers of the same class year.

For example, the mean for the events attendance variable should be interpreted in this manner: the average number of events attended by the sample population was 1.45 events.
less than the average for their classmates of the same year. Another important distinction to note is the outcome measure of donor status was based on lifetime giving instead of the three-year giving definition by the survey authors because the other donation metrics were based on lifetime outcomes, in addition to previous research being based on lifetime status. This difference produces a much higher donor status rate (93% versus 36%). The survey used the three-year limit in its methodology for donor categorization because that is the college’s standard for considering someone a current donor.

**SEM Model**

Three SEM models were required to answer the research questions:

1. What is the nature of the relationships between engagement behaviors, alumni identity, and donations?

2. Do the relationships follow Mael and Ashforth’s (1992) OID framework?

**Number of Gifts Model**

Initial analysis found that while all pathways for engagement and alumni identity were significant, many of the control variable pathways were not (Figure 3). To improve fit, the variables for STEM major, marital status, income, and class year were excluded. The remaining controls of distance and race were significant at the .05 level. In examining fit, the initial model required further changes to reach acceptable levels. A modification indices analysis was conducted, determining that three pairs of error terms from survey items needed to be correlated. The resulting model had a RMSEA score of .07, a CFI score of .88, and TLI value of .86. This model fit was not strong, but still acceptable, since the RMSEA score is at or below .08 and the CFI and TLI values are approaching the top end of the 0-1 scale (Blunch, 2008).
Results indicated path coefficients among the latent constructs were all significant at the .001 level (see Table 5). These results provided strong evidence of a predictive relationship. Moreover, none of the coefficients measuring indirect effects were zero, meaning identity plays a mediating role. Beginning with the direct effect, the coefficient for engagement to number of gifts was 8.8. This means for every one unit increase in the engagement construct, an alumnus is predicted to give, on average, almost nine more gifts. Turning to the indirect effect, the unstandardized pathway coefficient for the path between engagement and identity was .11, and the coefficient from identity to number of gifts was 5.5. The indirect effect is determined by the product of β1 and β2, yielding .61. Thus, the total effect (β3 + (β1 x β2)) is 9.41. Together, these suggest that although identity mediates the effect of engagement on
giving, that indirect effect is small compared to the direct effect of engagement on giving. Moreover, as Table 5 illustrates, the direct effect of engagement on giving is greater than the direct effect of identity on giving. The R-squared for the number of gifts was .27 indicating that the model explained 27% of the variance of number of gifts. This was the largest of all the models. The alumni identity R-squared was .11.

### Table 5

**Number of Gifts: Path Coefficients between Latent Variables**

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Unstandardized $\beta$</th>
<th>Standardized $\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumni identity</td>
<td>.11</td>
<td>.33</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Number of gifts</td>
<td>8.80</td>
<td>.47</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Alumni identity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of gifts</td>
<td>5.50</td>
<td>.10</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

### Total Giving Model

Similar to the previous model, the model for total giving used a dependent variable that compared participants’ giving to the average of their peers. This analysis also found all the control variables to be not significant and were excluded (Figure 4). This model did produce an acceptable fit, though not quite as good as the previous model. After adjustments to item error covariance made from a modification indices analysis, the model had a RSEA score of .08. It had a CFI of .89 and TLI of .86, which were acceptable. The direct effect of engagement on giving was 18,161.39, meaning the model predicted an $18,161.39 increase in lifetime giving compared to their peers for every one
unit increase in the engagement construct. For the indirect effect, the unstandardized pathway coefficient for the path between engagement and identity was .14, and the coefficient from identity to giving was 982.84. The indirect effect was determined by the product of β1 and β2, yielding 137.60. Thus, the total effect (β3 + (β1 x β2)) was 18,298.99. Together, these suggested that although identity mediated the effect of engagement on giving, that indirect effect was small compared to the direct effect of engagement on giving. However, the aspect of this model most worth noting is that not all pathways were significant. Pathway β2, or alumni identity’s direct effect on giving was not significant at the .05 level (Table 6). This finding indicates that alumni identity is not a significant predictor of the sheer amount of donations. This finding also contradicts OID theory’s claim that identity leads to organizational support in the form of donations. The R-squared for this model was .05 indicating that the model explained 5% of the variance of number of gifts. This was the smallest of all the models. The alumni identity R-squared was .1.

Table 6

Total Giving: Path Coefficients between Latent Variables

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Unstandardized β</th>
<th>Standardized β</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumni identity</td>
<td>.14</td>
<td>.36</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Total giving</td>
<td>18,161.39</td>
<td>.26</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Alumni identity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total giving</td>
<td>982.84</td>
<td>.01</td>
<td>.84</td>
</tr>
</tbody>
</table>
Donor Status Model

The donor status model examined the constructs’ relationships in predicting the first act of donating. Details of the model are available in Figure 5 and Table 7. Of the six control variables, class year, race, and marital status were retained. Class year was significant at the .001 level, but it had a negative correlation with giving. These results indicated that as the age of the alumni in the sample increased, the model predicted less likelihood of alumni being donors. However, the unstandardized coefficient was -.002, indicating a small effect of only -.2% change in the likelihood per year increase. This model showed that alumni identity was a stronger predictor of donor status than engagement. The pathway for alumni identity’s effect on donor status had an unstandardized coefficient of .12 indicating a 12% increase in the likelihood of being
donor from a one-point increase in alumni identity. The direct effect of engagement on giving was .03. The indirect effect is determined by the product of $\beta_1$ and $\beta_2$, yielding .012. Thus, the total effect ($\beta_3 + (\beta_1 \times \beta_2)$) was .042. Just like the other two models, these results suggested that identity mediates the effect of engagement on giving.

While the mediating effect was observed, the differing values of $\beta_2$ and $\beta_3$ support Mael and Ashforth’s (1992) OID theory in that alumni identity is a strong predictor of initial supportive behaviors measured by donor status. The model also provided evidence that their theory of identity being a predictor of donations and engagement similarly may be true, although the lack of the ability to model the feedback loop hinders definitive conclusions. The model was acceptable for interpretation with a RMSEA score of .08, a CFI of .84, and TLI of .81. The R-squared for this model was .07 indicating that the model explained 7% of the variance of number of gifts. The identity R-squared was .09.

The donor status model is unique because it is only predicting the initial donation act, while the other two models predicted lifetime behaviors. It was suspected that the student satisfaction component of alumni identity was most important in this relationship since it was the only component guaranteed to occur before the gift. To further explore satisfaction component, the model was ran again with just those questions relating to student satisfaction (questions 1, 4A, and 4B) forming the identity construct. The standardized coefficient for identity’s effect on donor status grew to .17 and was significant, supporting the claim that student satisfaction is especially important in predicting the initial gift.
Figure 5

Modified Path Model for Donor Status

Table 7

*Donor Status: Path Coefficients between Latent Variables*

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Unstandardized $\beta$</th>
<th>Standardized $\beta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alumni identity</td>
<td>.10</td>
<td>.32</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Donor status</td>
<td>.03</td>
<td>.12</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Alumni identity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Donor status</td>
<td>.12</td>
<td>.15</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Model Comparisons

None of the fit statistics for the models indicated particularly good fit, but they were still interpretable after making modifications to the control variables and item error co-variances. The overall results highlight how the various donor activity measurements yielded different results. Table 8 shows comparisons on model fit and pathway coefficients to provide simple comparisons. Most surprisingly, the model predicting total giving resulted in alumni identity not being a significant predictor of giving. This result was in direct opposition to assertions made by OID theory. The discrepancy indicated that alumni identity in the sample can significantly predict the initial act and frequency of donating, but it is not significant predictor of the size of those donations.

Table 8

Model Comparisons: Fit Measurements and Coefficients

<table>
<thead>
<tr>
<th>Model Measurements</th>
<th>Number of Gifts</th>
<th>Total Giving</th>
<th>Donor Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMSEA</td>
<td>.07</td>
<td>.08</td>
<td>.08</td>
</tr>
<tr>
<td>CFI</td>
<td>.88</td>
<td>.89</td>
<td>.84</td>
</tr>
<tr>
<td>TLI</td>
<td>.86</td>
<td>.86</td>
<td>.81</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement • Alumni Identity</td>
</tr>
<tr>
<td>Engagement • Donations</td>
</tr>
<tr>
<td>Alumni Identity • Donations</td>
</tr>
</tbody>
</table>
The other notable finding was the comparative standardized coefficients for engagement and alumni identity for predicting donations. In the donor status model, the coefficients are similar, but alumni identity is larger. For the number of gifts and total giving models, engagement is a powerful predictor and much larger than alumni identity. These differences suggest that while the positive feelings captured in high alumni identity may contribute to an initial donation, prolonged support is more predicated on the active participation associated with the engagement variables. These engagement behaviors also predicted alumni identity consistently across all models.

Summary

This study has successfully addressed the following research questions:

1. What is the nature of the relationships between engagement behaviors, alumni identity, and donations?

2. Do the relationships follow Mael and Ashforth’s (1992) OID framework?

Beginning with the first question, the results suggested the characteristics of the relationship differed depending on the outcome measure representing donations. All the models showed a mediating effect on the engagement construct’s relationship to the donations made by the alumni. This structure indicated the alumni’s attitudes toward the college might explain how participating in engagement activities affected their continued donation habits. Bearing this common finding in mind, the other differences between the models have implications on interpreting the results. For the total giving model, alumni identity was not a significant predictor of increased amounts of money donated, indicating a different nature to the relationship in which a positive alumni identity does not significantly lead to larger donations. Alumni identity was significant for the number
of gifts model, but the engagement construct coefficient was larger. This model most closely fits the proposed pathways outlined in Figure 2 and was well suited for the SEM. Finally, the relationship was also different in the donor status model. Those results showed alumni identity as a stronger predictor of donor status, indicating positive identity was a strong predictor of an initial gift.

In regard to how these findings relate to Mael and Ashforth’s (1992) OID theory, the results were somewhat mixed, but the consistent effect of engagement on both identity and donations indicate OID is lacking in its omission of important post-graduation experiences and the use of using engagement to predict donations. Their theory is based on the idea that identity leads to positive behaviors including donations, and that engagement and donations should be treated equally as outcome variables, rather than treating engagement as a driver of donations worthy of serving as a predictor. However, OID theory was supported by the donor status model as an initial action (first gift) was predicted significantly and more powerfully by identity. Since the identity construct is in a suspected feedback loop with engagement, identity is likely a driver of initial engagement behaviors as well. Limitations in the AMOS program hindered the ability to make a definitive conclusion. However, it is clear OID theory was not supported by the total giving and number of gifts models. The total giving model indicated no significant relationship between identity and the amounts of donations, completely rejecting OID theory in that context. Similarly, while the number of gifts model does show a significant relationship, the evidence suggested that engagement was a driver of both identity and donations, while identity plays a mediator role. The implications of these findings are addressed in more depth in the following chapter.
CHAPTER V

DISCUSSION AND CONCLUSION

The relevance of the findings detailed in this study are clear. Colleges are entering an increasingly uncertain landscape in which volatile enrollments, a demand for increasing amenities, and a coming downturn in the traditional college-age population will likely spell the end for many under-resourced institutions. This is a particular concern for small private colleges, like the one in this study, because of their reliance on tuition dollars instead of direct state government support. The best asset these colleges have to avert disaster is the population that is most invested in their success, their former students. By understanding the relationship between alumni identity, engagement, and donation behaviors, colleges can effectively solicit continued alumni support and build healthy endowments that ensure not only survival, but also the opportunity to thrive.

This chapter summarizes the study’s key findings and reflects on the relevance of Mael and Ashforth’s (1992) OID theory in this context. This chapter also examines the application of SEM to alumni fundraising, the relevance of using the three measures of donations in academic research, this study’s contributions to the academic field, and the implications for practice. This chapter ends with recommendations for future research and conclusions of the study.

Summary of the Study

This study addressed the following research questions:

1. What is the nature of the relationships between engagement behaviors, alumni identity, and donations?

2. Do the relationships follow Mael and Ashforth’s (1992) OID framework?
By using the SEM technique and three outcome measures for donations (donor status, total giving, and number of gifts), the results showed differing characteristics in each model. While engagement maintained a consistent and significant role in all models, alumni identity’s role was interpreted differently in each context. In predicting donor status, identity was significant and had a larger coefficient than engagement. For total giving, identity was not significant, indicating that feelings of connectedness are not reliable antecedents of increased donation amounts. Finally, the number of gifts model was the closest fit to the proposed model. It showed both constructs as significant and powerful, and it most supported the conceptual framework of a mediating relationship. The models did not have particularly good fits, but they were robust enough to show the strength, significance, and nature of the relationships of interest. The various models further showed that while Mael and Ashforth’s (1992) framework was somewhat supported by the donor status model, it is not supported by the total giving or number of gifts models.

It is important to note that the research questions were specifically being addressed in the context of a small private college. While the results can be reasonably applicable to similar institutions, previous research suggested that the alumni donor motivations are affected by institutional characteristics (Radcliffe, 2011; Thompson, 2010). These characteristics may change how the relationships work in, for example, a large public university. The college meets Whetten’s (2006) definition of a holographic organization, and it reasonable to think larger colleges and universities would have more intra-college competition, affecting the relationships to the institution as a whole. While the study was limited to only one holographic college, the findings should be helpful to
other researchers and practitioners seeking to understand how the concepts of identity, engagement, and donations are related.

**SEM Application**

As mentioned in the literature review, the practice of structurally modeling equations has rarely been used in the field of college fundraising. Only two previous known studies used a similar analysis and were conducted in the 1990s. Heckman and Guskey (1998) conducted a path analysis that visualized the alumni-college relationship using discretionary collaborative behavior theory. The authors noted the visualized path allowed for easy understanding of the complicated relationships. This study equally excels in that regard by using 23 variables and pairing them into a visual representation of three constructs. This study differs from the Heckman and Guskey research by focusing on donations as a sole outcome variable. The authors used a scale outcome variable that counted up to 20 positive behaviors, weighting donor status (occurrence of any gift) equally with acts such as hiring an intern or volunteering with admissions. This distinction is important because the structure of Heckman and Guskey’s (1998) study reflected the similar worldview of Mael and Ashforth (1992) in which engagement and donations are treated equally as positive outcomes in the same setting. This study fundamentally shows engagement should be viewed separately as a particularly strong and reliable predictor of donations.

In the only other known example of SEM in college fundraising, Mosser (1993) used the method to show the mediating effects of giving capacity on the alumni donation relationship. His findings match other research that has shown the measures of capacity having a significant impact on the donation behaviors of alumni (Belfield & Beney, 2000;
Monks, 2003; Thompson, 2010; Van Horn, 2002). The fundamental difference in Mosser’s (1993) research was that he was able to model 18 variables into six latent constructs in the same model, which is helpful to understand the theoretical implications. For example, instead of reporting the variable tracking involvement in student activities as a donation predictor, the Mosser’s (1993) visualization shows that social integration (of which student activities is a part) is a major component in the donation relationship. Similarly, this study shows engagement, as a construct, is a significant antecedent of donations in all three models, providing more clarity than listing the results of the suspected engagement variables in a regression table. Additionally, just as Mosser (1993) modeled the mediating effect of capacity, this study similarly modeled the mediating effect of alumni identity on the engagement and donations relationship.

Two important distinctions exist between this study and Mosser’s (1993) approach. First, Mosser made the outcome variable (alumni gift giving behaviors) a latent construct composed of the observed variables of major donor, total giving, number of gifts, and number of gift years. While Mosser’s approach was novel in the research, this study shows the importance of treating the various methods of donation measurements distinctly separate because they are practically and statistically very different. Mosser also did not center the giving measurements by comparing individual donation numbers and amounts to peers. This oversight meant that his study did not appropriately account for the vast age differences in the sample of 110,000 participants. The second important distinction was that this study reflects the progression of research in forming distinct concepts of engagement and alumni identity. Mosser’s (1993) latent construct of “motivation to give” combined elements of both engagement and identity concepts,
including variables of event attendance, college approval, and satisfaction. He found the
motivation to give construct was a significant predictor, which is understandable
considering those formational elements, but this study reflects the understanding that they
should be viewed separately, as evidenced by the sizable differences in strength and
significance in the various models.

As stated earlier, all three models in this study had acceptable measures of fit in
the SEM, but they were not particularly strong. The primary reason for the less than ideal
fit is that engagement was modeled as a latent construct instead of four individual
variables. Mosser (1993) similarly modeled groups of observed variables as latent
constructs. Unfortunately, SEM techniques were less advanced at the time, and that study
did not provide fit statistics in the same ways it was measured in this context. Instead,
Mosser (1993) measured the model’s effectiveness primarily by the amount of variance it
explained, and this study had similar R-squared results. Since the Cronbach’s alpha for
the engagement construct was low, it is understandable that the overall fit would be
affected. That being said, the benefit of modeling observed variables as latent constructs
in a SEM aids in the testing and development of theoretical principles, which was a
primary aim of this study. Since all four variables of engagement are well defined
measures, they appropriately are grouped in the model despite having negative effects on
the overall fit. Additionally, the OLS regression results provided in Appendix B shows
the variables’ individual correlations for a comparison.

The other benefit of using SEM was that the AMOS program allowed for
understanding of the antecedents, their constructs, and the pathways simultaneously to
ascertain fit. By using the construct coefficient estimate significance, modification
indices, and model fit estimates (RMSEA, CFI & TLI), changes were made to the model (dropping variables, accounting for co-variance) to ensure that the completed results most accurately reflected the characteristics of the data.

The one shortcoming in each model was that the AMOS program could not run the calculations with a feedback loop from the constructs of alumni identity to engagement. Mael and Ashforth (1992) based their model on engagement being a dependent variable predicted by identity, but subsequent research has shown it to be more useful as a predictor of donations and identity (Dillon, 2017; Drezner & Huehls, 2014; Kroll, 2014). While an ideal model would include this feedback loop, that integration is not possible in this context. However, the results provide significant insights into the relationships of interest and provide enough information to answer the research questions.

**Research Question 1**

The first research question examines the nature of the relationships between engagement behaviors, alumni identity, and donations. The most important takeaway from this research is that the relationships between alumni identity, engagement, and donations differ depending on how the donations variable is measured. Alumni identity was a mediator of engagement’s relationship to donations in all three models. However, the different contexts show that while engagement has a relatively consistent effect, identity has different role implications in each. Figure 6 visualizes the new theories of the relationships supported by these models.
Figure 6

Proposed Theoretical Relationships for the Various Models

Donor Status

Alumni Identity (Satisfaction) → Engagement

Engagement → Donation (Initial Gift)

Total Giving

Capacity → Engagement

Engagement → Donations ($)

Number of Gifts

Engagement → Alumni Identity

Alumni Identity → Donations (#)

The findings of this study are not robust or generalizable enough to definitively prove these new models, but the results, in combination with previous research, form the basis for modeling donor motivations in these three ways, depending on the measure of donations. The justifications for these interpretations are provided later in this chapter, but it is important to note the figure only includes the suspected primary drivers in the relationships. Demographic variables, for example, are excluded, except in the total giving model where capacity was suspected to be a major part of the system. Similarly, organizational antecedents described in Mael and Ashforth’s (1992) original OID theory were excluded because the scope of this research was limited to one institution.
**Donor Status Model**

Despite the many flaws with Mael and Ashforth’s (1992) measurement of donations, the closest outcome variable used in this study that resembled their model was donor status, or whether the participant had ever made a financial gift to the college. It should also be noted that their definition of donor status similarly included a lifetime timeframe. The donor status model shows that alumni identity has a mediating effect on the relationship between engagement and donations, which was seen in the other models as well. However, the other results from this model frame how these findings should be interpreted. This model showed the strongest relationship between alumni identity and giving, with a .15 standardized coefficient. The coefficient was even higher than that of engagement’s relationship with donor status at .12. This was the only model where the alumni identity had a higher coefficient for donation than engagement.

These results imply several important aspects to the relationship. First, even though the mediating relationship reflects a central finding that identity mediates the relationship between engagement and donations, the stronger coefficient observed in identity’s relationship to donations indicate that Mael and Ashforth’s (1992) focus on identity as the primary antecedent may be true in regard to donor status. A suspected feedback loop exists between engagement and identity that cannot be appropriately modeled in AMOS. This model’s coefficients provide the strongest evidence that, conceptually, identity should be seen as a predictor of positive initial support behaviors.

Further, by using donor status, the model essentially predicted the antecedents to the alumnus/na’s initial act of giving, or the action of changing from a non-donor to a donor. Since the sample included a large range of ages, their initial decision to give may
have been as much as 60 years ago. This consideration indicates engagement as an antecedent may have a lesser effect because the engagement data are measured in lifetime actions, which include those occurring after the initial gift. It is important to note that the concept of alumni identity is made up of three components: student experience satisfaction, current sentiments on the college, and positionality as a member of the community. The student satisfaction component is particularly important because that concept was the only part of the construct guaranteed to reflect what happened prior to the first gift. Van Mosser (1993) and Horn (2002) similarly found student satisfaction to be a primary driver of donations. To further emphasize this point, when the model was run with only survey questions relating to satisfaction forming the latent construct, its standardized coefficient increased to .17, showing the potent relationship between satisfaction and the initial decision to donate. Similarly, the model’s findings support Mael and Ashforth’s (1992) belief that identity, drives support, including donations, and possibly engagement as well. If the alumni had a positive student experience, it is logical to believe they would be more likely to attend events, engage online, volunteer, and send their children to the school. In summary, the donor status model supports the assertion that positive student sentiments directly lead to positive organizational support in the form of both an initial gift and alumni engagement. In Figure 6, the proposed theoretical model supports the framework of OID theory, with the added pathway between engagement and donations and the feedback loop between identity and engagement.

As an additional note, three control variables were deemed acceptably significant, marital status, race, and class year. Marital status is representative of giving capacity. Being married is associated with financial stability, thus allowing for more discretionary
income with which to donate. The significance of marital status also matches findings by Belfield and Beney (2000) and Monks (2003). Similarly, the race variable (White vs. Non-White) may be representative of capacity due to the country’s systematic history of racism and the comparative generational wealth associated with White college graduates. This finding matches Thompson’s (2010) study. In addition to race’s effect on giving capacity, it is additionally likely that race is a predictor due to the college’s inability to solicit alumni of color (Drezner & Huehls, 2014; Gasman, 2002). This consideration was relevant to this context since the vast majority of the college’s advancement staff is White, and it is believed this was the case for its entire history. Both Drezner and Huehls (2014) and Gasman (2002) suggested increased diversity in advancement staff leads to effectiveness in soliciting donations from alumni of color.

Finally, class year was a predictor but surprisingly was negatively correlated. Class year was added as a control variable because it is believed that as alumni age, their capacity to donate increases. The negative correlation was small, with a .2% decrease in likelihood of being a donor for every increase in class year. Nonetheless, the negative correlation contradicts research showing it as a positive predictor of philanthropy (Hoyt, 2004; Leslie & Ramey, 1988; Thompson, 2010). However, this finding matches OID theory well. Mael and Ashforth (1992) listed age (recentness of membership) as a negative predictor because they believed as more time passes from graduation, the alumni’s connections fade. However, despite their theory, their study did not find recentness of membership to be a significant predictor. While this model’s result may appear to support their claim, there may be another reason for the significant negative correlation. Since the donor status model predicted the antecedents for the alumnus/na’s
first act of giving, solicitation tactics and generational philanthropy culture may
conceivably be at fault. The role of fundraising, specifically widespread annual giving
(small donor participation campaigns) efforts, have only grown to prominence in the last
few decades. This trend may indicate that since participation-driven fundraising was not
an institutional focus initially for older generations, alumni from those eras may have
perceived alma mater philanthropy as not as important compared to the younger alumni.

**Total Giving Model**

This model similarly showed identity has a small mediating effect on
engagement’s relationship to donations. However, the most important finding was that
alumni identity is not a significant predictor of total giving. While the feelings associated
with alumni identity may play a significant part in the decision to give, they are not
significant in predicting the decision to give larger amounts. The total giving variable
encompassed a large range (-$51,759.40 minimum, $1,594,900 maximum, compared to
class averages). While it was first suspected outliers may have affected the results, an
analysis of the distribution showed that while the positive tail of the curve was long, the
variation was gradual. Additionally, the sample’s distribution was fairly representative of
the population in this regard. A few people in each class give at the major gift level
(>$100,000) amounts, many give nothing, and the remainder have a normal distribution
around the mean. These findings indicated that exclusion of the largest donors in the
sample was not warranted.

Mael and Ashforth (1992) suspected giving capacity played too large of a role in
total giving decisions to be correctly predicted in a regression model. However,
engagement was a significant and powerful predictor of the variable, which contradicted
this claim. If the total giving variable was as problematic as suspected, the engagement construct should not be significant. The unstandardized coefficient for engagement was 18,161.39, indicating the model predicted that for each unit increase in engagement, alumni give $18,161.39 more than their peers of the same class year. This sizable coefficient highlights the value of active alumni engagement. The components of the engagement construct included volunteering, event attendance, digital engagement, and being the parent of a current student. These variables were dependent upon actions by the college. The college identifies volunteer projects, hosts alumni events, provides online initiatives, and encourages legacy applicants in the admission process. The results show these efforts result in sizable returns.

While regression studies do not usually detail variables deemed non-significant, it is warranted in this case due to the surprising absences seen here. Of the six control variables (estimated household income, class year, race, marital status, degree concentration, and geographic distance from the college), none had sufficiently significant enough estimates to be included. Their lack of significance is important because, of all the models, total giving was suspected to be the most influenced by capacity. It is difficult to fully explain why the various forms of giving capacity indicators were not significant in this model, but when included with the alumni identity and engagement components of the SEM, they were not significant. For comparison, when all control variables are included in an OLS linear regression (Appendix B), the estimated income and class year variables were significant at the .05 level, indicating measures of capacity are relevant in the traditional contexts examined in previous research. Income had an unstandardized coefficient of .05, meaning that for every dollar
increase in estimated income, alumni were predicted to give five cents more than their peers. The class year unstandardized coefficient was 255.60, meaning the model predicted a $255.60 increase in giving compared to peers for every increase in year.

One of the main differences between using a traditional regression method and the SEM is the use of latent constructs, and the models studied latent constructs for engagement and alumni identity. Since the identity construct was not significant, the results indicate at least in the context of total giving, alumni identity, or the representation of the alumni’s beliefs about the college and their experience, is not as relevant as the behavioral (engagement) and demographic (control) antecedents. Further, identity’s lack of significance suggests that for predicting total giving, a traditional regression approach (Appendix B) may have been more warranted since the relationships were less complicated, and the effects of capacity are better represented.

The R-squared for this model was fairly low at .05, or only explaining 5% of the variance. The OLS regression similarly had an R-squared of .07. The model was intended to be fairly comprehensive based on previous prediction studies, but it is clear it is missing something important regarding the alumni’s donor motivations. Each donor is different, and there are many factors at work in any philanthropic decision. However, the most likely significant group of factors not captured in this model, or the others, is solicitation tactics, which in itself is a significant area of academic research (Weerts, 2007). Donors are unlikely to spontaneously donate with no prompting, and how they are asked is crucial. Various methods are regularly employed in this context (phone, email, social media, in-person, and peer-to-peer), and within those methods various pitches are employed by the solicitor. Specifically relevant to this model, the amount solicited is also
varied in those pitches. That being stated, the scope of this research is limited to alumni characteristics, specifically their engagement actions and identification beliefs, and thus solicitation variables were not included.

In summary, while the model had significant flaws, it answered the research question and illuminated understanding of how the concepts related to each other. As was observed in all models, engagement was significant and powerful in predicting alumni identity and donations, and engagement’s relationship with donations was mediated by alumni identity. Alumni identity was not a significant predictor of donations, indicating that alumni beliefs about the college and their student experience do not play a significant role in predicting the amount of their donations. Further, using the SEM with the inclusion of alumni identity did not appropriately account for the suspected influences of giving capacity. That conclusion was the reason that in the proposed theoretical model for total giving (Figure 6), the relationship was depicted as engagement and capacity predicting total giving, while identity is excluded.

Number of Gifts Model

This model was the best suited for the SEM. All pathways were powerful and significant, the model had the lowest RMSEA value (.07), and the model accounted for 27% of the outcome variable’s variance. The model showed a mediating effect, which fits well conceptually. Additionally, engagement had a sizably larger standardized effect on the number of gifts, as compared to identity (.47 vs. .1). These results suggest the modeled pathway most reflects reality of all those studied. In practice, this model suggests that while it is clear alumni who engage with the school are more likely to give, their beliefs explain a significant portion of how these engagement activities impact their
decision to form giving habits. This was a noteworthy finding because it suggests while 
engagement is an obvious way to increase donations, the sense of identity mediates these 
effects. It is also clear that increasing engagement was a strong predictor of identity. 

Examining the coefficients further explains the relationships. The unstandardized 
coefficients for engagement’s effect on number of gifts shows that increasing one unit of 
engagement results in 8.8 more predicted gifts compared to their peers. This was a sizable 
effect, especially when considering many donors give annually, meaning that increasing 
engagement results in years of continued support. As stated earlier, the number of gifts 
model measured the establishment of donation habits, which is desirable under Atchley’s 
(1989) continuity theory. The unstandardized coefficient for identity’s effect on number 
of gifts was 5.5, and engagement’s indirect effect was .69, further highlighting the 
mediating effect. The results illustrate the power of alumni identity in the long-term 
philanthropic relationship. In interpreting the mediating effect, the large coefficient for 
engagement’s effect on identity suggests that engaging unsatisfied alumni is worth the 
effort in terms of donations, but that a poor sense of identity is hard to overcome. 

For the control variables, race and distance were significant. Race was also 
significant in the donor status model, and the relevance was discussed earlier. However, 
its relevance in predicting multiple measures of philanthropy is worth noting. It bears 
repeating that the systematic effects of racism on giving capacity, and/or the inability of 
the college to effectively solicit alumni of color likely effect the alumni’s decision and 
ability to make the first gift and repeatedly give. 

Distance was significant in only this model. Distance was included in the study 
because in previous studies, both Bruggink and Siddiqui (1995) and McDearman and
Shirley (2009) found geographically closer alumni were more likely to be donors. It was suspected that living closer to campus positively affects philanthropy because nearby alumni have more opportunities to interact with college representatives and can visit campus more often. Radcliffe (2011) was skeptical about distance’s influence on engagement as both previously cited studies were conducted on public university populations. This study is the first time known to the author where distance has been studied in a private college context. Distance was significant and had a negative correlation. The variable was calculated in nautical miles from campus. The survey consultants provided GPS coordinates for the location of the survey participant when they took the survey. This measure was used instead of calculation by listed home address as it was believed to be more accurate. There may have been instances when the participant took the survey while traveling far from their home, but that risk of error was smaller than the perceived error associated with some out-of-date home addresses suspected in the college’s database. The unstandardized coefficient was -.001, meaning there was a predicted decrease of .001 gifts for every mile from campus, or one gift for every 1,000 miles. Contextually, an alumnus/na living close to campus in the Western United States was predicted to give approximately two more gifts (compared to peers) in their lifetime as opposed to someone living on the East Coast. These findings support previous research and provide evidence that living closer to campus is a positive predictor in this small private college context.

**Research Question 2**

The second research question asks if the models follow Mael and Ashforth’s (1992) OID framework. The premise of OID theory is that a person’s internal connection
to his/her alma mater is the primary driver for support. They wrote that support includes both donation and engagement behaviors. They approached their work by framing engagement and donations equally as outcome variables predicted by identity. However, other research has shown various measures of engagement have been significant predictors of donations, highlighting the need to use engagement as a predictor of donations (Drezner & Huehls, 2014; Hunter et al., 1999; Thompson, 2010; Wunnava & Lauze, 2001). Conceptually, this distinction involves large implications because colleges spend considerable resources engaging alumni with the expectation of philanthropic support. If the alumni-college relationship is best captured by OID theory, the decision to donate would be mostly based on the student experience and institutional factors, with little regard for what happens after graduation. The restriction of being unable to model the feedback loop in the SEM was a significant limitation to answering this research question. Ideally, if AMOS was able to model both pathways between engagement and identity, there would be more definitive conclusions to draw. However, the results provide new perspectives on the nature of the relationships that increase understanding of how the theory may work, or not work, in this context.

This study answers the research question by revealing evidence that engagement was consistently significant in all models, and that OID theory did indeed fall short in neglecting the importance of what happens to the relationship after graduation. The relationship is not frozen in time, and OID theory did not reflect the opportunities that colleges have to drive connectedness. While each model has unique characteristics that have implications for the relevance of OID theory that will be discussed further, the significance of engagement definitively shows that the models do not support the theory.
While that central findings negates the main premise of the theory, there were some supportive findings worth noting. All models showed alumni identity is a mediator in the relationship between engagement and donations. This positively supports OID theory, because it implies that while the post-graduation actions of engagement drive donation behaviors in all models, those effects are at least partially impacted by the alumni’s sense of connectedness. For example, an alumnus/na may attend an event, such as a class reunion, and have an engagement experience that may normally lead to a donation; but if they had a negative sense of identity going into the reunion, that event’s effect on their willingness to donate could be hindered.

In the donor status model, OID theory was found to be most supported. Donor status is the outcome variable that most closely resembles how Mael and Ashforth (1992) defined giving behavior, and it reinforced their thinking about identity driving behavior. Identity was the stronger predictor of donor status, compared to engagement, leading to the conclusion that identity plays a larger role than engagement in donor status outcomes. This is conceptually relevant when considering that the donor status model predicted the antecedents to the first gift. As stated earlier, the satisfaction component of identity is suspected to be the primary driver of the initial gift. In the same way, OID fits as a predictor of the first engagement behaviors as well. While the model was unable to show this relationship fully with the absence of the feedback loop, those who are satisfied with their experience are likely to seek engagement opportunities as well as donate. In this sense, OID theory may fit the model by showing identity as a strong driver of initial post-graduate behaviors.
In sharp contrast, the total giving model did not support the main component of OID theory. Alumni identity was not a significant predictor of the amount given compared to their class peers. This finding implies that the internal feelings associated with alumni identity have no significant effect on the decision to give larger amounts. Engagement, however, was significant and powerful. This relationship shows that engagement, or post-graduation experiences, should be viewed as prime antecedents of increased donation amounts. As stated earlier, OID theory did not contain any element of post-graduation experiences and implied that the alumni-college relationship is frozen in time upon graduation. This model shows that sentiment was not only unfounded, but also that engaging alumni can yield tens of thousands of dollars more than their peers over their lifetime.

Finally, in the number of gifts model, identity was significant in the context but was overshadowed by engagement. The model shows that identity is a significant predictor and mediator, indicating a conceptual path where an alumnus/na’s satisfaction and sense of connectedness frames how they experience engagement activities. However, those activities in turn appeared to increase their identity, while also driving their giving habits to form long-term support. This type of model may be embodied by an alumnus/na who volunteers to interview prospective students for admissions. If the experience is meaningful, it will likely increase a sense of connectedness. The individual may decide to donate to scholarships that help the types of students who were interviewed. Since the volunteer project is annually cyclical, the alumnus/na may develop an annual donation habit as well. This virtuous cycle is ideal for college fundraising operations. The alumnus/na benefits through volunteering and donating, and the college benefits from
both as well. This type of engagement could form a habit of donations that culminates in a major estate gift upon death and generations of students who benefit from the philanthropy. This cycle was not encapsulated by OID theory; thus, the theory was not fully supported in this context.

In summary, evidence in this study suggests the Mael and Ashforth (1992) OID theory is fundamentally not supported in this context because of the theory’s absence of post-graduation relationship factors, specifically those categorized as alumni engagement. There does appear to be some evidence that the theory is correct in its emphasis on identity in the decision to donate, at least initially. However, the overall finding is that the theory did not accurately reflect the importance of the alumni experience and the use of engagement to drive long-term behaviors that lead to increases in both the number and monetary amount of donations.

**Implications and Recommendations**

The following recommendations add to and enhance the existing literature of alumni engagement and fundraising by providing a clearer picture of the alumni-college relationship. The primary finding is that identity plays a different role in the donation pathway depending on how donations are measured. Similarly, Mael and Ashforth’s (1992) OID theory is still relevant in describing initial supportive behaviors. However, the theory is not as applicable in encapsulating the pathways that represent long-term support (number of gifts and total giving). It should be noted that these implications are particularly relevant to small private colleges that are holographic in nature, like the college in this study, but many of the recommendations described in this section may be
generalizable to advancement professionals in other contexts, especially if the alumni population is believed to have generally high levels of identity.

As mentioned earlier, the author is both a researcher and a practitioner in the field. Thus, the implications for practice are top-of-mind. First, the differing results show the importance for college leadership to set clear goals for their advancement staff. As observed in this study, the pathways to predict the three measures of giving are vastly different (Figure 6). The models translate to advancement goals of participation (donor status), recurring donors (number of gifts), and total dollars (total gifts). Strategies involved in reaching those three goals certainly overlap, but the focus on specific tactics would be noticeably different.

For example, the study found the initial gift (donor status) is considerably predicted by identity with a likely emphasis on student satisfaction. In the sample, the vast majority of alumni (73%) were very satisfied with their student experience. Assuming this percentage is representative of the larger population, an effective participation tactic would be to focus on discovering lost (no known contact information) alumni and soliciting them. It is entirely possible that large numbers of alumni have never donated simply because they have not been asked. This method of discovery is recommended because alumni who are reachable are regularly solicited in multiple ways (phone, email, peer outreach, and social media). Reachable alumni most likely have already been solicited, and they are unlikely to suddenly donate if they have not already done so.

If the college was specifically interested in raising total dollars, then the focus would be considerably different. Since engagement and capacity are the primary
suspected drivers of increased donation amounts, the goal would require a more personalized approach. An applicable strategy would be to conduct considerable research on which alumni have large giving capacities and target them with specific engagement opportunities (special events, meetings with leadership, serving on boards, and child admissions outreach). College staff, most likely major gift officers, could seek to build a personal relationship with the alumni, keeping them connected to the college while also ascertaining their giving interests. This strategy also relates to identity-based theories, in that alumni often donate to causes within the institution that help students with whom they identify. They may endow a chair in their former department, support sports they played, or donate to scholarships for students from their area or background. This type of engagement strategy is labor intensive for college staff but certainly worth the effort when considering that major gifts represent a large portion of college fundraising from a small group of donors.

Finally, if the goal is to establish a giving habit, a combination approach is needed. This goal is often overlooked in institutional priorities since there is considerable emphasis on short-term returns. This study shows that both alumni identity and engagement are significant predictors, and the pathway shows that engagement can increase identity which, in turn, increases the number of gifts (Figure 6). The recommendation for establishing giving habits would be to first to ensure alumni are provided with meaningful engagement opportunities. A standard practice would be to host alumni events, both on and off campus. While the model indicates this to be particularly effective, some consideration should be shown to alumni outside of major communities. Digital and distance engagement is a primary method to accomplish this,
and the recommended method would be to include campus communications (newsletters, alumni magazines, and social media). The contact discovery method mentioned for donor participation is also relevant in establishing habits. The crucial additional step would be to encourage those first-time donors to give repeatedly. Special staff attention could be given to alumni who have given previously but not recently. Staff members could do personal outreach to those alumni and provide them with specific engagement opportunities that fit their interests. Additionally, stewardship practices should be bolstered so alumni feel that their gift is appreciated, regardless of the amount.

Another recommendation to establish giving habits would be to focus on volunteer engagement. Volunteer opportunities include being a guest speaker, interviewing potential students, hosting events, and serving on a board or committee. These opportunities are important in several ways. First, they provide alumni with access to the current state of a college in a meaningful way. Approval of the current state of the college is a key component of alumni identity. Therefore, it is understandable that engagement and identity are closely related. These volunteer opportunities are often repeated annually, so the alumni who participate are continually engaged on a long-term basis. These opportunities also form a direct personal link between the alumni and the college. For example, alumni who speak annually in classes will likely develop close relationships with the professors and feel comfortable reaching out whenever they have a question related to their alma mater. Finally, emphasis must be placed on these volunteer roles, as they are beneficial in their own right, sometimes even more so than a monetary donation. Board members may volunteer their expertise in law, finance, or leadership, saving the college large sums for that knowledge that would normally be expended on
consultants. The vast number of volunteer roles in academics and student affairs similarly provide great value to the student experience, such as industry connections, current practitioner perspectives, and mentoring. The overall recommendation to support donation habits (number of gifts) would involve prioritizing institutional efforts in creating, maintaining, and tracking comprehensive alumni engagement opportunities, with specific attention on stewarding donor relationships. An important consideration in this approach is that these relationships may take many years to show a return on investment in terms of staff resources, but that return will be well worth the effort.

This study also may be of use to colleges that are similar to the institution studied, particularly those who emphasize the future outcomes of engagement through cost-benefit analyses. The models predicted sizable increases in long-term giving for relatively low efforts on the part of the college. For example, for every volunteer role a participant in the sample held, they were predicted to give $4,615 more than their peers. Even more surprisingly, each event attendance predicted an increase of $632 over peers. Even by conservative estimates, the resources spent on even the most labor intensive and costly engagement initiatives at the college appear to be well worth the effort. More research is needed on how different types of events and volunteering predict different levels of giving, but the general sentiment that colleges can easily invest in future giving returns by providing these opportunities is a practical implication. These noteworthy increases are also not accounting for the immense value these alumni volunteers are providing to the college or the intangible benefits of driving up identity through social gatherings.

Finally, it is worth considering the implication of the models showing that identity likely mediates the effects of engagement on donations. In practice there may be a point
of no return where if an alumnus/na has a strongly negative sense of alumni identity, they may never make a donation, regardless of the engagement efforts. It is recommended that practitioners take this effect into account, especially when considering the three aspects of identity: student satisfaction, college approval, and positionality. Reengagement may be worth the effort most of the time, but not always. For example, if an alumnus/na of color has a poor student experience due to racism, the resulting low sense of alumni identity can be overcome by showing the college’s improvements in areas of equity, diversity, and inclusion through engagement. However, if another alumnus/na is dissatisfied with the direction of the college embodied by its leadership, there is little that an engagement effort can do to encourage a donation. It is recommended that practitioners should generally err on the side of promoting engagement opportunities because of the intangible benefits it provides and the argument that improving an alumnus/na’s position from a detractor to a passive constituent is still a worthy improvement.

**Future Research Directions**

As mentioned previously, the area of alumni fundraising has been well researched, but this study contributes to the body of knowledge that serves to inform future methodical techniques. First, it shows that SEM is useful in this context, especially if the research seeks to combine the wide variety of variables suspected to play a role in the alumni giving prediction process. The method allows for the thoughtful compilation of latent constructs in a more useful way than traditional regression methods. This method could be especially helpful if the research involves the need to take well known predictors, such as engagement variables, and combine them into one construct. As such,
the method does have some shortfalls. In the total giving model, alumni identity was deemed insignificant, and the model did not appear to appropriately account for capacity variables that an OLS linear regression would have found significant (Appendix B). In those cases, in which the model is simpler, SEM may not be the best method. However, as a vast amount of previous research has involved surveys, the modeling of latent constructs in SEM would be ideal.

Additionally, future research should carefully deliberate on what outcome variable to use when measuring donation behaviors. As the study shows, the various measures yield vastly different results. If available, future studies should include all three measures for recorded donations. If choosing only one measure, there should be careful consideration given to explaining what is being measured. The donor status model predicts the first act of giving, the number of gifts model predicts the formation of a giving habit, and the total giving model predicts the amount given, hopefully after accounting for capacity. Figure 6 provides new theoretical frameworks to inform future studies. Future research should also avoid using the problematic donation self-report method employed by Mael and Ashforth (1992) due to issues with measurement error and self-reporting inflation (Dillon, 2017). Modern survey methods, like the one used by the college in this study, allow for the matching of survey responses to known alumni records. This method should be used when available so the model can include the most accurate donation, engagement, and demographic information.

This study also shows the importance of centering the data and/or reporting variables by their comparison to their class year’s mean. This method accounts for the vast age differences in the sample, which likely have large implication for giving data.
The sample contained a nearly six-decade age range, so comparing alumni on the extremes of the age distribution could lead to skewed data. By centering the data, the results were still interpretable, and the study made better comparisons. Showing results in comparison to means is helpful to practitioners as well because it provides a guidepost to gauge normal alumni behavior in the population.

The logical next step in this type of research is to test whether the construct relationships behave differently at other types of institutions. If a sufficiently large enough sample was obtained, the model could be reconfigured with varying institution sizes and missions. This variance may allow for the testing of Mael and Ashforth’s (1992) organizational antecedent predictions. Since their sample involved only one institution, their theory of what institutional characteristics contribute to identity and donation behaviors is untested. Thompson (2010) undertook a large-scale data mining project to examine donation predictors, but the varying quality of institutional data was a hindrance, and the OID framework was not used. SEM could be employed, as well, to allow for the analysis of latent constructs.

The other burgeoning field of research in the academic community is developing predictive scoring for alumni giving. Dillon (2017) was the most notable example, focusing on the use of a survey to predict scores for the whole population based on imputation methodology. Advancement offices are also commonly using software solutions to predict the donation propensity of alumni based on multitude of mostly demographic factors (Henze & Bechard, 2011). A future study could utilize the models in this research to develop predictive scores and test their accuracy. Developing alumni identity and donation propensity scores is incredibly relevant to practitioners, as a score
may help college staff prioritize their engagement and solicitation efforts. The findings from this study could be applied to this type of research, especially since there are applications for predicting the three types of donation behaviors.

While the results of this study advance the understanding of donor motivations, additional research is needed into personal donation decisions based on the new theoretical models provided. This may be best examined through qualitative methods, and an ideal study would delve deeper into the aspects of alumni identity and ascertain in greater detail its relationships to engagement and giving. Most importantly, in-depth alumni interviews could investigate how exactly identity may be mediating the effects of engagement on donations. By doing so, there may be a deeper understanding of the ways in which to overcome low senses of alumni identity through engagement. Further, a qualitative study could reveal if student satisfaction really is the primary driver of initial behaviors and if identity has any bearing on the decision to give larger amounts. It is also worth exploring what elements of the engagement experience lead to greater senses of identity and ultimately, donations.

Finally, another interesting research method could involve determining how alumni identity changes in the same individuals over time. This could be accomplished by surveying the same respondents at a later date and comparing the results. Most importantly, this method would be valuable in ascertaining whether those who engaged in some way between the surveys report higher levels of identity. It would also be valuable in examining how changing life stage dynamics can affect the various relationships. A recommended time frame would be approximately five years to allow for sufficient relevant changes to occur.
Conclusion

This study enhances the understanding of the complicated relationships between engagement, alumni identity, and donation behaviors through SEM. By using this technique and three outcome measures for donations (donor status, total giving, and number of gifts), the results indicate that post-graduation experiences are significantly relevant to all donation contexts. The models also show alumni identity exhibits differing characteristics in each context.

In the donor status model, identity was more significant than engagement in predicting the first occurrence of a gift. This result supports OID theory and its emphasis on student satisfaction driving initial supportive behaviors. However, in predicting total giving, identity was not significant. This finding shows the decision to give more money is better predicted by engagement and capacity. The SEM was least suited for the total giving model. The inclusion of the identity construct led to the measures of capacity to appear to be not significant, even though they were undoubtedly at work in predicting total giving and were significant in an OLS linear regression. The SEM was best suited for the number of gifts model, and it accounted for 27% of the outcome variable’s variance. The model indicates engagement is a better predictor than identity, but both are significant.

All models showed that engagement is a significant and powerful predictor of alumni identity, and that identity mediates engagement’s effect on donations. While the lack of ability to model a feedback loop between identity and engagement hindered fully answering the second research question, engagement’s significance in all three models further shows that OID theory did not properly account for the effects of the post-
graduation experience on identity and donations. OID theory may still be relevant to the donor status model and its emphasis on initial behaviors, but not the others. Three new theoretical models are proposed in this study (Figure 6) to aid in understanding these concepts.

The conclusions drawn from this research have significant applications for academic understanding of these relationships, as well as for practitioners seeking to increase the various measures of donations. This study is a prime example of the benefits of including multiple methods for measuring outcome variables in donation studies because the relationships were different in each. It also shows the general benefit of using SEM in alumni philanthropic research, especially when survey methodology and latent constructs are involved. For practitioners, this research provides guidance for staff members seeking to increase the various forms of giving. For participation drives, simply locating the satisfied alumni is incredibly beneficial since the model shows satisfaction to be a significant predictor of the initial gift. For increasing total dollars, identifying capacity and engaging alumni has large yields. The model predicted that increasing one unit of engagement yields over $18,000 more in an alumnus/na’s lifetime giving compared to their peers of the same class year.

Finally, establishing donation habits is perhaps the most underappreciated, yet most crucial, tactic in college fundraising. The results showed that increasing meaningful opportunities for engagement predicted the establishment of long-term giving habits. These virtuous cycles are mutually beneficial relationships in which alumni are steward throughout their lives to give repeatedly and engage regularly, which generates loyal alumnus whose contributions and value, both in time and money, cannot be
understated. The relevance for understanding the alumni-college philanthropic relationship is crucial now more than ever. The industry is facing an uncertain future where steady philanthropic support is perhaps the best way to ensure survival. By engaging a loyal and reliable alumni donor base, these institutions have the opportunity to thrive for generations to come.
REFERENCES


Appendix A

Selected Survey Instrument Items and Results

1. How satisfied are you overall with your experience as a student at XX College?
   - Very satisfied ........................................ 73%
   - Somewhat satisfied ................................. 22%
   - Neither satisfied nor dissatisfied ............... 2%
   - Somewhat dissatisfied ............................. 2%
   - Very dissatisfied .................................*

2. How would you describe your overall feelings about the college today?
   - Very positive ........................................ 54%
   - Somewhat positive ................................ 27%
   - Neutral/mixed ..................................... 12%
   - Somewhat negative ................................. 6%
   - Very negative ..................................... 1%

3. How have your feelings about XX changed since you were a student there? Overall, have your feelings about XX...
   - Become more positive ......................... 15%
   - Stayed about the same ......................... 63%
   - Become more negative ......................... 22%

4. How much do you feel... [RANDOMIZE]

   A Great Deal  A Fair Bit  Only  A Little  
   Not At All

   B. Appreciation for your XX experience .......... 74%  21%  5%  *
   A. Pride in your XX affiliation ..................... 55%  33%  11%  1%
   F. XX College values its alumni .................. 33%  48%  16%  3%
   C. An emotional connection to XX .................. 38%  36%  23%  3%
   E. A lifelong relationship with XX is worth maintaining ..................... 30%  40%  27%  3%
   D. You are still part of the XX community ........ 11%  25%  47%  17%

   * = more than zero, but less than half of one percent

5. How do you feel about your current level of engagement with___? Would you like to...
   - Be more engaged with XX than you are now ........ 29%
   - Maintain your current level of engagement ........ 67%
   - Reduce your level of engagement with ___ .......... 4%

6. Which of these statements best describes how XX fits in your life today? It is...
   - One of the most important affiliations in your life today ..................... 12%
   - Important to you, but other affiliations are more important in your life today ... 60%
   - Not among the affiliations that are important in your life today ................ 28%
7. If you were asked, how likely would you be to recommend XX College to a prospective student of your own interests and background?

9-10 (Promoters) ........................................ 56%
7-8 (Passives) ........................................... 26%
0-6 (Detractors) ....................................... 18%
Net Promoter Score (Promoters minus Detractors) ....... 38%
Appendix B

Linear Regression Results

Regression Model: Total Giving

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<tr>
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<th>Standardized Coefficients</th>
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Notes. R squared= .073 VIF Range 1.026-1.746

Regression Model: Donor Status

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### Regression Model: Number of Gifts

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