

POST-EMPLOYMENT RELATIONSHIPS:
EXTENDING THE EXCHANGE RELATIONSHIP FRAMEWORK BEYOND
THE BOUNDARIES OF EMPLOYMENT

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ABSTRACT

Over the past several decades, declining employee tenure and rising external employee mobility have emerged as defining employment trends changing employee-organization relationships. While the traditional perspective is that the relationship ends upon an employee's exit, I argue that these relationships can transition into what I introduce as "post-employment relationships" or the interactions and exchanges between an organization and its former employees, also known as alumni. Drawing on social exchange theory and the inducements-contribution model, over the course of two studies I contend exchange relationships developed during employment can be extended through emerging organizational practices called Corporate Alumni Programs. In Study 1, I collected data from over 1,000 alumni in two corporate alumni networks and utilized structural equation modeling to find a positive association between involvement in corporate alumni programs and returns to the organization, also known as post-employment citizenship. Furthermore, while social and mission-driven motivations were positively related to alumni program involvement, career and pragmatic motivations were not significantly associated with involvement. The findings in Study 1 prompted additional questions that I examined in a second study. Study 2 draws on over 500 responses from a new alumni network to examine the relationships between demographics (i.e. age, sex, and race) and motivations as well as between motivations and specific alumni benefit use. I found age was negatively related to career

motivations while females had stronger career and social motivations. Finally, results suggested motivation type plays a critical role in the specific benefits that alumni use. Career motivations were positively related to job board use. Pragmatic motivations were associated with use of benefits or perks provided by the alumni program, and social motivations were associated with increased use of in-person events and messaging features. In addition to traditional variable-centered analyses, I also employed the person-centered analytical method, latent profile analysis, to identify subgroups of alumni. These subgroups exhibit unique configurations of alumni motivations and vary in their relationships to alumni program involvement and post-employment citizenship.

BIOGRAPHICAL SKETCH

Rebecca graduated from Lehigh University in 2006 with a double major in Finance and Marketing and a minor in Religious Studies. After working in financial consulting, human resource analytics, and as a lecturer in Thailand, Rebecca completed a Master of Science in Human Resources (MSHR) from Loyola University Chicago in 2012. Rebecca entered the MS/PhD program at the School of Industrial and Labor Relations at Cornell University in 2013. She completed an additional Master's degree (Concentration: Human Resource Studies) in 2016 with her thesis that examined the attributions employees make about work-life benefits. Rebecca earned Doctor of Philosophy (Ph.D.) with a concentration in Human Resource Studies in 2019. In her dissertation, she introduced the concept of “post-employment relationships”, or continuing exchange relationships between an organization and its former employees, also known as corporate alumni. In July 2019, Rebecca will join the Sauder School of Business at the University of British Columbia as an Assistant Professor.

DEDICATION PAGE

I would not be here without the support and encouragement from my family. To my parents, Tom and Julie Paluch, thank you for the endless and unwavering support as I chose one wacky path after another. Little did you know what you were getting yourself into when you took home the girl with the crazy hair but lucky birthday. Your support kept me going during the times when I wasn't sure I could finish. Thank you to Maggie, Anthony, Bella, Matthew, and Morgan. You were available when I needed the breaks from work to keep me sane and put up with me during stressed periods of time. Bella, Matthew, and Morgan, whether you knew it or not, you inspired me to set an example that anything is possible for your own little lives, and I thank you for unending laughs and unconditional love.

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LIST OF ABBREVIATIONS

EOR	Employee-Organization Relationships
HR	Human Resources
LMX	Leader-Member Exchange
PEC	Post-employment citizenship
SHRM	Strategic Human Resources Management

LIST OF SYMBOLS

Δ	delta/change
df	degrees of freedom
e.g.	example gratia/for example
et al.	et alii/and others
i.e.	id est/that is
M	mean
N	number of observations
n.s.	not significant
OLS	ordinary least squares
p	level of significance
SD	standard deviation
***	$p < .001$ (two-tailed test)
**	$p < .01$ (two-tailed test)
*	$p < .05$ (two-tailed test)

INTRODUCTION

Declines in worker tenure and the concurrent rise of external employee mobility have emerged as defining employment trends that are shaping the modern world of work. In contrast to traditional notions of a lifetime career in a single organization, recent data finds the average Baby Boomer in the United States workforce held 12 different jobs between the ages of 18 and 50 (Bureau of Labor Statistics, 2017). Moreover, data from LinkedIn suggests the number of jobs held during this age range is not likely to decrease as the number of jobs held in the first five years after graduation doubled over the past 20 years jumping from 1.6 jobs to 2.85 jobs (Berger, 2016). Supporting these reports from industry, scholarly evidence finds that employee tenure has been on the decline since the 1970s (Hollister, 2011) due to a combination of factors such as the fall of industry unionization (Bidwell, 2013), managerial preferences for downsizing rather than retraining or redeployment (Hallock, 2009), and the reduction of firm-sponsored benefits (e.g. health insurance and pensions) that fostered reliance on organizations (Mishel, Bivens, Gould, & Shierholz, 2012).

These evolving employment trends have had particularly significant implications for research examining employee-organization relationships (EORs). Traditionally, researchers have adopted the perspective that organizations provide inducements such as job security, wages, and benefits to employees with the expectation they will provide loyalty, commitment, and effort in return (Coyle-Shapiro & Shore, 2007; March & Simon, 1958). While it is widely acknowledged that the exchange of job security for commitment is no longer the norm (Cappelli, 1999; Cappelli & Keller, 2014; Coyle-Shapiro & Shore, 2007), the primary focus in the field remains immutably directed at examining the *extent* to which job security is exchanged for loyalty and commitment in a continued attempt to foster long-term

relationships (Shore et al., 2004). Indeed, the implicit goal of supporting long-term employee-organization relationships is demonstrated by the frequency with which researchers focus on enhancing employee commitment and reducing employee turnover (e.g. Coyle-Shapiro & Kessler, 2000; Hom, Tsui, Wu, Lee, & Zhang, 2009; Shaw, Dineen, Fang, & Vellella, 2009; Sturman & Walsh, 2014).

While these studies have significantly contributed to our understanding of evolving organizational relationships, they are firmly rooted in the assumption that the relationship is contingent on the individual's membership in the organization. This limitation has meant little consideration has been given to what happens to relationships when employees do inevitably leave an organization leaving researchers to assume that the termination of employment signals the end of the relationship all together. Emerging evidence, however, suggests that interactions, attachment, and paths of influence can continue after the formal employment relationship ends. For example, researchers have found former employees can affect various organizational outcomes such as revenue-generating opportunities (Carnahan & Somaya, 2013; Somaya, Williamson, & Lorinkova, 2008), organizational status (Godart, Shipilov, & Claes, 2014; Shipilov, Godart, & Clement, 2017), and talent supply (Raghuram, Gajendran, Liu, & Somaya, 2017; Tan & Rider, 2017). Furthermore, scholars have produced evidence of lingering effects on individuals in the form of residual commitments to a former employer (Breitsohl & Ruhle, 2013, 2016; Klein, Brinsfield, Cooper, & Molloy, 2017).

These findings suggest that relationships can and do occur after an employee's organizational exit and prompts several important theoretical and practical questions. From the organizational standpoint, one might question whether an organization should pursue relationships with individuals who either chose or were asked to leave. What does the

organization stand to gain from pursuing continued relationships with former employees? From the individual perspective, it raises the question of why a person would want to continue a relationship with a former employer. What drives individuals to re-engage with a past employer? Are there varying motives that would drive an individual to participate in a relationship with their former employer? If so, are these motives differentially associated with observable demographics or how individuals choose to re-engage with their former employers?

Thus, in this research, I first introduce the concept of *post-employment relationships*, or continued interactions between organizations and their former employees (i.e. alumni). By introducing this concept, I argue for a shift in perspective such that relationships are no longer bounded by organizational membership and exchange relationship frameworks are extended to consider continued interactions between organizations and their former employees. In the following research, I provide support for the existence of post-employment relationships as well as make arguments about how post-employment relationships differ from comparable individual-organization relationships, specifically EORs and alumni-university relationships. I contend that given changing workforce trends and advancements in technology, post-employment relationships are becoming increasingly critical.

To test my arguments, I draw on social exchange theory (Blau, 1964) and the inducements-contribution model (March & Simon, 1958) to explore how organizations can strategically develop and extend exchange relationships with former employees. Evidence from industry reports indicates that many organizations are already experimenting with post-employment relationships through emerging organizational practices, known as corporate alumni programs. These programs provide former employees, also referred to as alumni, with

resources such as networking events, alumni newsletters, job boards and opportunities, exclusive discounts, and conveniently centralized alumni platforms (Sertoglu & Berkowitch, 2002; Tucker, 2018). In return, organizations hope alumni will reciprocate with contributions that support company goals and performance. These contributions, which I refer to as post-employment citizenship, can manifest in a variety of forms such as a willingness to recommend the organization's products and services or the company as a place to work.

In order to develop an understanding of the alumni perspective, I propose four underlying reasons that can cause alumni to participate in a post-employment relationship and examine how these motivations drive overall involvement in the alumni program as well as practice-specific use. Furthermore, prompted by a desire to understand how organizations can strategically address alumni wants and needs, I examine how demographic characteristics (i.e. alumni age, sex, and race) are differentially associated with these four types of alumni motivations. Finally, as individuals may be driven by more than one motivation, I explore how the four motivations emerge in person-based identifiable configurations. I examine these hypotheses and research questions using a traditional variable-centered perspective but also employ an inductive person-centered approach to investigate whether sub-groups of alumni emerge based on motivational patterns.

This research makes several contributions to existing research. First, the application of social exchange theory to relationships between organizations and employees has traditionally led EOR researchers to focus on enhancing employee retention and extending organizational membership under the assumption that a continuing relationship is contingent on formal employment. Contrary to this population notion, however, findings from this research suggest that exchange relationships can be extended beyond formal employment when an organization

offers inducements in the form of corporate alumni programs. This leads to an increase in the likelihood that alumni will provide supportive contributions to the organization in the form of post-employment citizenship thereby developing post-employment exchange relationships. As such, this research expands the scope of relationships that organizations can have with individuals in employment settings and justifies investigation into exchange relationships that transcend organizational boundaries. Second, while researchers have explored functional motivations for a variety of behaviors (e.g. working, volunteering, mentoring; Clary, Snyder, & Ridge, 1992; Latham & Pinder, 2005; Ragins & Cotton, 1999), the identification of the underlying motivations that drive alumni behavior are particularly critical for this new and emerging organizational activity, involvement in alumni programs, in order to harness the benefits of growing alumni pools. Thus, this research adds to current literature on functional motivations demonstrating its relevance in a new context and with unique motivational sub-dimensions.

Third, this research not only examines the effects of motivations on overall alumni program involvement but also investigates nuanced relationships between the different motivation types and individual practice use. Specifically, I find alignment of motivations and individual practices is important as some motivations (i.e. career and pragmatic) may be more closely aligned with particular practice use rather than overall program involvement. As motivations are not readily identifiable, this highlights the importance of finding associations between motivations and observable alumni characteristics, specifically demographics. Thus, the fourth contribution of this research is the examination of the relationships between demographic characteristics, namely age, sex, and race, and alumni motivations. Drawing on socioemotional selectivity theory (Carstensen, 1995; Carstensen, Fung, & Charles, 2003;

Carstensen, Isaacowitz, & Charles, 1999) and research on gender, networks, and homophily (Ibarra, 1992, 1993; Kanter, 1977; McPherson & Smith-Lovin, 1987), I discover that age, sex, and race are likely to influence the varying reasons that alumni are motivated to get involved with alumni programs.

Finally, research on motivations, and on organizations more broadly, traditionally adopt a variable-centered approach which examines the unique and independent relationships between multiple variables and focal outcomes (Cohen, Cohen, West, & Aiken, 2003). While appropriate for isolating independent effects, this approach does not allow for the consideration that multiple variables are operating in tandem or in meaningful patterns (Wang & Hanges, 2011). Thus, in an attempt to develop more complex theory on cause-effect relationships (Fiss, 2011), I employ both variable-centered and person-centered perspectives to develop theory about how different types and patterns of motivations are differentially associated with alumni outcomes. In summary, in light of changing employment trends this dissertation aims to make critical theoretical and practical contributions by advancing knowledge about how organizations and their alumni can continue exchange relationships that are unbounded by formal organizational membership.

POST-EMPLOYMENT RELATIONSHIPS

From Employment Relationships to Post-Employment Relationships

The fact that relationships between employees and organizations have been dramatically evolving has been widely acknowledged by both scholars and practitioners since the early 1990s (Shore, Coyle-Shapiro, & Tetrick, 2012). Technological advancements, the decline of unions and other labor market institutions, and a growing desire for organizational

flexibility are just a few of the contributing factors to what scholars are calling a “breakdown” in the implicit social contract that has historically governed work and employment relationships (Bidwell, Briscoe, Fernandez-Mateo, & Sterling, 2013; Cappelli, 1999; Kochan, Riordan, Kowalski, Khan, & Yang, 2019). Scholarly interest in understanding how these relationships are evolving and what it means for organizations, employees, and society at large have led to a substantial body of research examining employee-organization relationships (EORs).

Research on EORs has traditionally been examined through the lens of social exchange theory (Blau, 1964) or the inducements–contributions model (March & Simon, 1958). Regarding social exchange theory, the general consensus is that an exchange relationship begins when one party bestows a benefit upon another party (Cropanzano & Mitchell, 2005). If the receiving party reciprocates, feelings of mutual obligation develop and may evolve into a trusting relationship whereby both parties adhere to mutually understood and agreed upon “rules of exchange” (Cropanzano & Mitchell, 2005; Emerson, 1976). Framed more narrowly within the organizational context, the inducements-contribution model contends that organizations initiate exchange relationships by providing employees with inducements (March & Simon, 1958). If employees perceive these inducements to be attractive, they are likely to reciprocate with contributions to the organization that continue as long as employees perceive a favorable imbalance in the relationship.

While this stream of research has been largely motivated by changing trends in the workforce, namely higher rates of employee mobility and shorter employee tenure (Shore et al., 2012), the majority of EOR research has neglected to address what happens when the relationship declines or comes to its conclusion. This may be because neither social exchange

theory nor the inducements-contribution model, the guiding theoretical frameworks in EOR literature, directly addresses the deterioration or ending of exchange relationships. While March and Simon (1958) implicitly address the end of relationships by arguing that exchange relationships can only continue as long as employees perceive a favorable imbalance, little guidance is provided by this literature as to how EORs are terminated or what to expect when an employee exits the firm. Thus, scholars are left to assume that employee exit simultaneously signals the end of the relationship itself.

However, theory and findings from alternative streams of research lend insight into various paths of continued influence and interaction between an organization and its former employees. These continued relationships can support organizations through exchanges of social, human, and financial capital that can support organizational goals as well as influence individual outcomes as a result of residual affective commitments (i.e. a remaining emotional bond with a former employer; Breitsohl & Ruhle, 2013, 2016), as well as quondam commitments (i.e. commitments employees used to have; Klein, Brinsfield, Cooper, & Molloy, 2017).

In line with theories of social capital and networks (Burt, 1992; Granovetter, 1973; Nahapiet & Ghoshal, 1998), Coff (1997) argued that social capital is an organizational asset that can be transferred through employee mobility. In other words, continued relationships with former employees can enhance organizational performance and outcomes by extending the organization's social network and creating bi-directional paths with a greater range of external entities. These extended networks and newly forged paths with former employees allow for absorption of valuable intangible resources such as new knowledge (Corredoira & Rosenkopf, 2010), creative resources (Godart et al., 2014; Shipilov et al., 2017), and external

social capital (Dokko & Rosenkopf, 2010). Prior research has also demonstrated former employees' ability to help or hinder an organization's strategy for human capital. For example, alumni may return with extra-organizational knowledge as "boomerang employees," (Shipp, Furst-Holloway, Harris, & Rosen, 2014; Swider, Liu, Harris, & Gardner, 2017) or provide referrals that enhance the organization's talent pool (Castilla & Rissing, 2019; Mael & Ashforth, 1992; Raghuram et al., 2017). Alumni may also deplete organizational talent by recruiting former colleagues for new jobs as evidence suggests entrepreneurs who hire prior colleagues have higher survival odds (Sarada & Tocoian, 2019).

Relationships with former organizational members can also yield valuable financial resources. Prior research has examined how the placement of former employees in client firms can support an organization's ability to generate and retain client business (Carnahan & Somaya, 2013; Somaya et al., 2008) or provide access to financial resources (Castilla & Rissing, 2019). Furthermore, employee exit decisions can have consequential implications for organizational performance as prior research has found that employee departure to start a new business has a greater adverse impact than employee departure for a job in a different organization (Campbell, Ganco, Franco, & Agarwal, 2012).

While these studies all suggest post-employment relationship paths from alumni to the organization, research has also documented the effects on individuals. For example, Klein and colleagues argue for the importance of quondam commitments, or "a state in which a person no longer has a consequential commitment bond" (Klein et al., 2017: 334). While the commitment bond may no longer exist, the authors argue that quondam commitments are likely to be quite influential for the individuals themselves as well as their future teams and organizations. For example, quondam commitments could influence the individual's

motivation to invest in the new organization which may ultimately impact the individual's professional performance as well as their contributions to their new team or organization. Relatedly, Breitsohl and Ruhle introduced the concept of residual affective commitment or "the strength of affective commitment towards and organization of which membership has ended" (2013: 162). In their research, they found that residual affective commitment may impact the individual's intention to return to their former employer as well as the promotion of the organization as an employer (Breitsohl & Ruhle, 2016).

Combined, this evidence suggests that continued exchanges between organizations and alumni can occur and be quite influential. However, this research has predominantly focused on the outcomes of associations between organizations and their alumni without questioning how or why these extended interactions occur. The few studies that have explored these questions focused on how experiences during employment or the formal membership period affected post-membership interactions. For instance, the seminal article by Mael and Ashforth (1992) on organizational identification utilized a sample of university alumni to explore how organizational characteristics and individual experiences, such as access to a mentor, satisfaction with the university's contribution to the fulfillment of student objectives, or time at the university, were associated with identification and support for the organization. Additionally, Raghuram and colleagues (2017) examined how advantages from quality leader-member exchange (LMX) persist even after employees leave an organization. They found that whether individuals harbored goodwill towards their former employer depended upon the quality of their relationship with their manager prior to leaving. In summary, these examples represent actions taken by one party that were motivated by past experiences as opposed to a continuing collaborative agreement between two consenting parties.

In contrast to the prior examples, social exchange theory (Blau, 1964) and the inducements-contributions model (March & Simon, 1958) are based upon the notion that trusting, loyal, exchange relationships are formed when two parties mutually agree to rules of exchange or reciprocity norms (Cropanzano & Mitchell, 2005; Emerson, 1976; Gouldner, 1960). According to these theoretical frameworks, the expectation of extended relationships between an organization and its former employees is most likely to manifest through continuing mutually-acknowledged exchanges of resources. Thus, in order to understand how and why relationships continue between organizations and former employees even after the individual has ended employment, I propose an expansion of the exchange relationship framework that extends beyond the boundaries of employment and introduce the concept of “post-employment relationships.” I define post-employment relationships as an overarching term that encompasses the exchange of resources between alumni and their former employer.

Given the changing labor market trends, it is critical that we begin to develop knowledge about post-employment relationships for both theoretical and practical purposes. To start, rather than ignore the possibility that employees will leave, the concept of post-employment relationships incorporates the inevitability of turnover in the employment process and expands the scope of the employee life cycle to consider relationships after the formal employment period. This shift in perspective creates new opportunities for both researchers and practitioners. Specifically, while substantial research has been conducted on HR policies and practices for potential employees prior to employment (e.g. recruitment and selection practices) as well as for formal employees (e.g. socialization, training and development, performance management, and compensation; Lengnick-Hall, Lengnick-Hall, Andrade, & Drake, 2009), comparatively little work has been done on HR policies and

practices for former employees. Rather than passively observe employee departure or consider extended interactions as spillover from past EORs, post-employment relationships encourage practitioners and scholars to consider how to strategically manage interactions with former employees. As such, practitioners and researchers can now view the progression of the relationship as one that starts prior to employment with recruitment and selection, continues and develops during employment with the EOR, and extends beyond employee exit.

Second, the concept of post-employment relationships highlights the importance of recognizing alumni as increasingly influential organizational stakeholders. Due to increasing organizational churn, the proportion of an organization's employee base to its alumni base is rapidly changing (Tucker, 2018). Barring significant organizational restructuring, the employee base in an organization does not drastically change from year to year. However, an organization's alumni base grows with every employee who exits the company. For example, a hypothetical organization that starts with a workforce equal in size to its alumni base and experiences a consistent 14% annual turnover rate¹ will have an alumni base that is twice the size of its workforce in approximately 7 years. Furthermore, recent technological advancements have not only opened lines of communication between organizations and alumni but enhanced alumni's power over their former employers (Faragher, 2018). Specifically, the rise of social media platforms such as LinkedIn (est. 2003) and Facebook (est. 2004) have created new possibilities for organizations to stay in contact with alumni that did not exist before the turn of the century. Furthermore, review sites such as Glassdoor have significantly enhanced the power of alumni to influence their former employer's reputation,

¹ 14% is the median overall employee turnover rate in organizations according to a 2017 Human Capital Benchmarking Report from the Society for Human Resource Management (<https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2017-Human-Capital-Benchmarking.pdf>).

talent strategy, and overall well-being. As such, the growing bodies of organizational alumni as well as their increased power in the labor market now demand more attention from practitioners and organizational scholars alike.

What Post-Employment Relationships Are Not: Comparison with Other Organization-Individual Relationships

While the concept of post-employment relationships may draw comparisons to other individual-organization relationship frameworks such as employee-organization relationships or university-alumni relationships, these relationships differ in several important ways. As seen in Table 1, post-employment relationships can be distinguished from employee-organization relationships and university-alumni relationships on a number of dimensions including the resources exchanged, the party with greater power, reciprocity requirements, the regularity of exchanges, and relationship cardinality.

Table 1. A Comparison of Individual-Organization Relationships

	Relationship Type		
	Post-Employment Relationship	Employee-Organization Relationship	University-Alumni Relationship¹
Involved Parties	*Former Employer *Organizational Alumna/us	*Employing Organization *Employee	*University *University Alumna/us
Resources Exchanged	Ambiguous- Organizations as former employers widely vary in whether alumni programming is made available and/or the extent of offerings. Little is known about if and how much alumni contribute to former employers.	Explicit- Employing organizations provide a salary or wages and benefits. Employees provide time, labor, and intellectual contributions.	Somewhat Explicit- Universities provides alumni offerings such as reunion events or newsletters. Alumni usually provide monetary donations but can also provide other benefits such as referrals or brand ambassadorship.
Party with Power	Balanced- Neither party is dependent on the other for the resources exchanged.	Organization- The employer generally has more power than the employee in establishing the terms of the contract.	Alumni- Universities rely primarily on alumni donations for financial resources.
Reciprocity Requirement	Discretionary- If either side decides not to contribute resources, the relationship can continue.	Compulsory- The relationship continues as long as both sides continue to provide the agreed upon resources. If either stops, employment ends.	Discretionary- If either side decides not to contribute resources, the relationship can continue.
Regularity of Exchange	Sporadic- No regular pattern of interaction.	Frequent- Generally occurs on a daily basis.	Sporadic- No regular pattern of interaction.
Cardinality	Many-to-Many- An organization has many alumni. Alumni can have many former employers.	One-to-Many- An organization has many employees while an employee usually has one employer.	One-to-Many- A university has many alumni. An alumna/us generally has one alma mater.

Note: 1) Comparisons are made based on relationships between a university and undergraduate degree alumni but are likely similar for graduate degree and other university alumni.

Employee-Organization Relationships. Employee-organization relationships are characterized by interactions between an employee and the organization, and these relationships are generally viewed as formal and explicit. EORs are guided by social or normative, if not legal, contracts and expectations about the resources that are to be exchanged in the relationship. While the resources exchanged can vary, generally organizations provide wages and benefits in exchange for time and performance from employees. For example, prior research has examined how inducements from the organization such as competitive salaries, training, or quality health insurance elicit contributions from employees such as meeting basic task performance goals, contributing citizenship behaviors, or demonstrating loyalty and commitment (Jia, Shaw, Jiao, & Park, 2014; Tsui, Pearce, Porter, & Tripoli, 1997). These established exchanges generally occur on a regular, if not daily, basis in order for the relationship to continue; if either side withholds their resources, the employment relationship will likely end. Furthermore, because the organization is viewed as the buyer of the employee's time and labor and has control over workplace norms, procedures, and expectations, EOR researchers generally view the organization as the party with more power in these relationships (Shore et al., 2004). This inequality of power may also be because an organization has multiple relationships with various employees while the employee traditionally must rely on one employer relationship.

Alumni-University Relationships. University alumni associations can be traced back to 1792 when graduates from Yale University formed the first known alumni group (Gill, 1998; Newman, 2011). A few decades later, alumni at Williams College formed the first official alumni association in 1821 named the "society of alumni" (Newman, 2011). However, it was not until 1917 that the framework for the modern alumni-university exchange

relationship was developed when leaders from a few newly formed alumni associations created the Association of Alumni Secretaries and issued the *Hand Book of Alumni Work* (Shaw, Embree, Upham, & Johnson, 1917). This handbook set the framework for alumni-university exchange relationships by guiding alumni associations to offer a variety of benefits to members in exchange for financial contributions in the form of dues. Over the years, universities have moved away from requiring formal dues, but have adhered to the framework which relies upon an exchange of benefits for financial donations from alumni (Newman, 2011). Today, contributions from alumni represent a substantial portion of total university financial donations as alumni contributions to their alma maters reached \$11 billion in 2017 and represented 26% of all donations to higher education institutions (Moody, 2018). The reliance of universities on financial donations from alumni has likely guided modern research interests in identifying the university variables or alumni characteristics that predict donations (e.g. Diamond & Kashyap, 1997; Harrison, Mitchell, & Peterson, 1995; Marr, Mullin, & Siegfried, 2005; Monks, 2003; Okunade, 1996; Okunade, Wunnava, & Walsh, 1994; Yoo & Harrison, 1989).

While similar in its adherence to exchange relationships frameworks, alumni-university relationships are distinct from post-employment relationships for several reasons. To start, university-alumni relations have a long history that has resulted in norms and expectations about the resources to be exchanged in alumni-university relationships. Most universities provide standard alumni programs such as homecoming events, newsletters, or hometown networking events with the goal of receiving alumni financial donations in return (Harrison et al., 1995; Yoo & Harrison, 1989). Furthermore, because universities are reliant on alumni contributions, alumni have more power in these relationships. Finally, similar to

EORs, universities have many student alumni particularly over the course of many years. In contrast, most alumni generally only have one alma mater.

Post-Employment Relationship. In contrast to both EORs and alumni-university relationships, post-employment relationships are unique in that they are relatively new and are not guided by social norms or expectations. Organizations vary considerably in whether they choose to provide resources to alumni as well as what resources may be provided. Similarly, there is wide variance on whether alumni are willing to engage in post-employment relationships and make contributions to their former employer. In contrast to EORs, if alumni choose not to participate immediately or disengage for extended periods of time, the relationship can still continue. Neither party is dependent on the other in post-employment relationships, and thus, neither side holds more power than the other. Finally, while EORs and alumni-university relationships operate under one-to-many relationships (i.e. one employer for multiple employees and one alma mater for multiple student alumni), organizations accumulate a large number of alumni and alumni can have multiple former employers.

In summary, post-employment relationships differ from similar entity-individual relationships on various dimensions. While these defining features help to better understand the conceptual definition of post-employment relationships, they also raise important questions. Specifically, what resources are exchanged in post-employment relationships? Furthermore, which alumni choose to engage in exchange relationships with their former employers and why? I begin by exploring these questions in Study 1.

STUDY 1

Post-Employment Relationship Exchanges

I draw on social exchange theory (Blau, 1964) and the inducements-contribution model (March & Simon, 1958), to provide the theoretical foundations for the development of the concept of post-employment relationships. In line with these theoretical frameworks, the organization can initiate or drive the exchange relationship by providing valued resources (March & Simon, 1958; Tsui et al., 1997). As such, organizations should be able to initiate and maintain post-employment relationships by providing inducements to alumni.

Conceptualizing Corporate Alumni Program Involvement. While scholars have historically paid little attention to interactions between organizations and alumni, practitioners have been experimenting with innovative practices known as corporate alumni programs in an effort to develop and maintain relationships with former employees. Corporate alumni programs have been in existence for decades, but there has been renewed interest in these programs in recent years due to the increasing volatility in the labor market (Tucker, 2018). Targeted at alumni, these practices and programs provide a variety of valuable offerings such as networking events, alumni newsletters, exclusive discounts, and alumni platforms that enable former employees to connect with each other, find information about the company, and apply to job postings.

As previously mentioned, limited empirical evidence is available that provides insight into the relationships between corporate alumni programs and organizational outcomes. One notable exception, however, is research conducted by Iyer and colleagues (1997) that sampled alumni of accounting firms. In this study, the researchers found alumni relations, measured by frequency and type of contact by the accounting firm, was positively associated with an inclination to benefit the organization. This relationship appears to achieve marginal significance as the authors report a p-value of less than .06. This tenuous relationship may be

due to the fact that alumni relations was measured as the extent of communications as opposed to inducements that may provide value to alumni. Extending upon this study, I argue that benefits provided through corporate alumni programs, and not just extent of contact, may be viewed as an organizational inducement aimed to initiate and maintain post-employment relationships with former employees.

Post-Employment Citizenship. Industry experts have suggested various ways alumni can reciprocate valuable contributions to their former employer. For example, Reid Hoffman, cofounder of LinkedIn, and colleagues offered four desirable outcomes from corporate alumni programs. The authors argue these programs can help with talent strategy, provide useful business intelligence, develop or enhance customer relationships, and encourage brand ambassadorship (Hoffman, Casnocha, & Yeh, 2014). Similar to Hoffman and colleagues, one of the earliest practitioner articles lauding the benefits of managing relationships with corporate alumni argued that alumni were beneficial as potential rehires and sources of referrals, suppliers of intellectual capital, ambassadors and lobbyists, and investors (Sertoglu & Berkowitch, 2002). Indeed, based on practitioner reports alumni managers rate brand advocacy, business development, and talent acquisition as the top three drivers of corporate alumni programs (Conenza, 2017).

Within academic literature, scholars have adopted various approaches to measuring alumni outcomes. In a study on the outcomes associated with alumni organizational identification, Mael and Ashforth (1992) examined alumni's *support for the organization*. While the study drew on university alumni and measured several aspects of financial donations, they also measured alumni's willingness to advise children to attend and willingness to recruit others. Relatedly, Raghuram and colleagues examined *alumni goodwill*

or “willingness to speak publicly and highly about them, to hold positive views of them as employers, and consider returning to them as employees in the future” as an outcome of continuing leader-member exchange (Raghuram et al., 2017: 405). Alumni goodwill was operationalized using questions that asked about the alum’s willingness to work at the organization again, to recommend it as a place to work, to rate it as a great place to work. Finally, accounting scholars operationalized alumni outcomes as *post-employment citizenship* (PEC), or “the proclivity of ex-employees to benefit their former firm” (Herda & Lavelle, 2011: 156). In this study, Herda and Lavelle (2011) operationalize PEC using scales that measure willingness to recommend the firm to others as well as making efforts to help the firm get more business.

While the measures are inconsistent, one common theme across the three conceptualizations of alumni outcomes is their focus on willingness to recommend aspects of the organization. This aligns with one of the most frequently cited goals of corporate alumni programs: brand ambassadorship (Conenza, 2017; Sertoglu & Berkowitch, 2002). It is also important because it is an outcome that is not restricted based on factors such as current employment status or status within a current organization. Specifically, an outcome such as returning to work for an organization may be dependent on current employment status (e.g. retirement or satisfaction with current employment). Similarly an outcome of bringing business to the organization may depend on the individual’s ability or authority to provide that contribution. In contrast, any individual has the ability to recommend aspects of an organization, and thus may be a more appropriate outcome to examine. I, therefore, propose that in exchange for inducements in the form of involvement with the corporate alumni

program, alumni can provide post-employment citizenship in the form of a willingness to recommend the company's products or services or the company as a place to work.

H1: Alumni Program Involvement will be positively associated with Post-Employment Citizenship.

Alumni Motivations

An important characteristic of post-employment relationships is they are voluntary in nature. The voluntary nature of these relationships highlights the importance of understanding the motivations that drive alumni to re-engage with their former employers. In an effort to understand why individuals voluntarily dedicate time, emotional involvement, and other personal resources to organizations, scholars have often focused on motivations, or predispositions to act in an effort to obtain valued goals or outcomes (Clary & Snyder, 1991; Knoke & Wright-Isak, 1982). Motivational scholars have often adopted a functional approach to argue that individuals can hold the same attitude or perform the same behavior but be triggered by different underlying motivations (Clary et al., 1998; Clary & Snyder, 1991). Indeed, over the past several decades, researchers have proposed various typologies of multi-dimensional motivations: Knoke and Wright-Isak's (1982) rational choice, normative conformity, and affective bonding motivations; the functional approach to volunteering motivations comprised of values, understanding, social, career, protective, and enhancement motivations (Clary et al., 1998); intrinsic versus extrinsic motivations in Self-Determination Theory (Deci & Ryan, 1985); the classic incentive typology that aligns with material, purposive, and solidary motivations (Clark & Wilson, 1961); Etzioni's utilitarian-normative-coercive model of organizational compliance (1975); and work motivations comprised of career, community, and cause (Goler, Gale, Harrington, & Grant, 2018).

While each of these frameworks provide slightly different classifications of motivations, the overarching theme is the pursuit of identifying the different motives, needs, and goals that drive individuals to commit their time and resources to an organization. Thus, I draw on prior typologies to offer descriptions of four dimensions that constitute alumni motivations for participating in post-employment relationships.

Career Motivations. A core motivation present in almost all motivational typologies is one that focuses on individual desires to maximize utility (Clark & Wilson, 1961; Etzioni, 1975; Knoke & Wright-Isak, 1982). Motivational researchers have previously found this utilitarian function can drive individuals to participate in voluntary activities in order to advance their careers (Clary et al., 1998; Clary & Snyder, 1991). In this sense, it may be that individuals participate in alumni networks based on *career-motivations* or motivations to participate in an alumni network to achieve professional goals through the enhancement or advancement of a job, career, or business. For example, an alumna may use alumni benefits to network with others to secure a new job or business deal or to acquire industry intelligence that will enhance performance in a current position.

Pragmatic Motivations. Related to maximizing utility (Clark & Wilson, 1961; Etzioni, 1975; Knoke & Wright-Isak, 1982), alumni may be likely to participate based on *pragmatic motivations* or motivations to maximize non-career-related utility through the conservation of resources such as time, money, or effort. This can occur if the individual perceives the benefits or services offered through the alumni network will help them conserve these resources. For example, some alumni networks continue to provide health insurance or retirement benefits while others provide exclusive promotions or discounts on personal items such as travel or technology purchases.

Social Motivations. A variety of motivational frameworks emphasize the importance of solidary or associative goals as a driver of individual behaviors (Clark & Wilson, 1961; Knoke & Wright-Isak, 1982; Smith et al., 1956). The benefits received in these instances have no tangible or monetary value but are instead found in the associative or social aspects of participation. As such, alumni may be motivated to participate because of *social motivations* or a motivation to develop social relationships and/or belong to a group or community. Alumni who are motivated by social goals are likely to participate in alumni networks to pursue friendship or affiliation by connecting with other alumni or current employees through the directory or attending organizationally-operated social events such as a holiday party or a happy hour. This motivation specifically captures alumni who are interested in participating for purely social or affiliative reasons.

Mission-Driven Motivations. Finally, motivational theorists have argued that people act in order to express altruistic or humanitarian concerns for others (Clark & Wilson, 1961; Clary et al., 1998; Grant, 2008). As such, alumni may participate in post-employment relationships to address *mission-driven motivations* or a motivation to contribute to a collective goal or mission that aligns with personal values. Some alumni may choose to participate in company-sponsored volunteer events or stay connected through alumni events because they support and believe in the organization's underlying mission.

In summary, alumni are likely to have various underlying reasons for participating in post-employment relationships. I propose four primary reasons for alumni involvement are to satisfy career, pragmatic, social, or mission-driven goals. While scholars speculate about the interactive effects of different motivations, appropriate empirical tools to fully examine the combinatory effects were unavailable. As such, motivational theorists traditionally proposed a

linear relationship: as the motivation increases, the likelihood or intensity of the behavior should also increase (Ajzen, 1991; Knoke, 1988; Knoke & Wright-Isak, 1982). Guided by these arguments, I expect there is a positive association between each of the four motivations and an individual's involvement in alumni programs (see Figure 1). Thus, I propose:

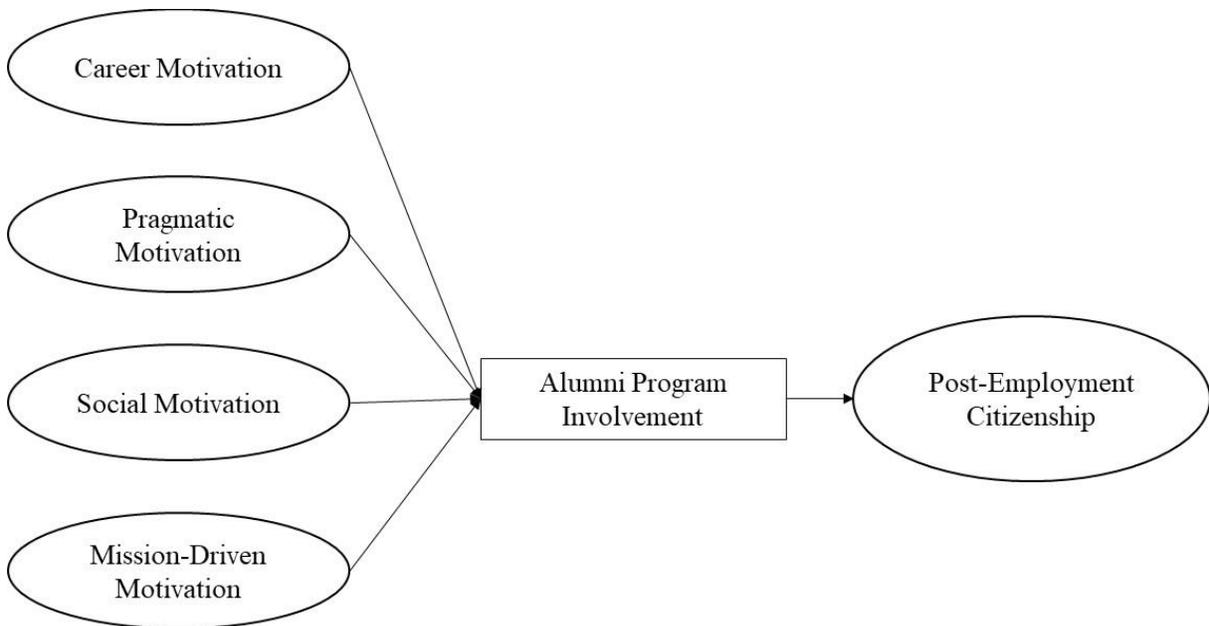
Hypothesis 2: Career Motivations will be positively associated with Alumni Program Involvement.

Hypothesis 3: Pragmatic Motivations will be positively associated with Alumni Program Involvement.

Hypothesis 4: Social Motivations will be positively associated with Alumni Program Involvement.

Hypothesis 5: Mission-Driven Motivations will be positively associated with Alumni Program Involvement.

Figure 1. Hypothesized Model



As discussed above, the core logic of the functional approach is to identify the varying individual motivations that drive the same behaviors or attitudes (Clary et al., 1992). The consideration of multiple motivations simultaneously begs the question of whether each of the motivations is equally effective in driving the attitudinal or behavioral outcome of interest. Findings from research suggest this is not the case. Drawing on various studies of functional motivation, scholars have distinguished between self-oriented motivations (i.e. motivations that impact outcomes for the focal individual such as acquiring new knowledge and skills, advancing one's career, and developing social relationships) and others-oriented motivations (i.e. motivations that impact the outcomes and well-being of others; Musick & Wilson, 2008). Findings repeatedly suggest that others-oriented motivations are related to behavioral outcomes such as volunteering (Brockner, Senior, & Welch, 2014; Pajo & Lee, 2011; Peloza & Hassay, 2006; Peloza, Hudson, & Hassay, 2009) while self-oriented motivations have generally had little to no effect on behavioral outcomes (Brockner et al., 2014; Carlo, Okun, & Knight, 2005; Finkelstein, 2008).

Applying this classification system to alumni motivations, career, pragmatic, and social motivations could be classified as self-oriented motivations while mission-driven motivations align with others-oriented motivations. Thus, I expect that mission-driven motivations will have a stronger relationship with alumni program involvement than the other three motivations.

Hypothesis 6: The relationship between Mission-Driven Motivation and Alumni Program Involvement will be stronger than the relationships between Career, Pragmatic, and Social Motivations and Alumni Program Involvement

STUDY 1 METHODS

Data

To test the proposed hypotheses in Study 1, I partnered with a company, hereafter referred to as Alumni Co, that provides corporate alumni platform and alumni program consulting services to clients in a variety of industries with the purpose of enhancing alumni engagement strategies. A corporate alumni platform is a private website that provides a variety of benefits and services to alumni in one centralized location. These alumni benefits and services include features such as profiles to help alumni directly connect with other alumni and employees, newsletters that include information from the company and alumni highlights, groups for discussions and knowledge sharing, events for reconnecting, and job opportunities posted by both the organization and alumni in other firms. In addition, Alumni Co offers support services, customized branding, information about alumni engagement best practices, global capabilities including translation for localized efforts, reporting and dashboard support, seamless integration with other existing organizational systems, and the ability to monitor metrics such as Net Promoter Scores.

Two Alumni Co clients agreed to participate in the study. These organizations vary in industry, employee size, and alumni network size as seen in Table 2. The procedures for recruiting alumni participants slightly varied depending on the company. Company A allowed confidential recruitment meaning that individualized survey links were sent to alumni who had previously agreed to being contacted by the company. However, due to country and company privacy restrictions, Company B could only post a non-identifiable survey link to their alumni site with general email notifications alerting alumni about the survey.

Table 2. Description of Alumni Networks

	Industry	Current Employees	Registered Alumni Members
Company A	Management Consulting	4,500	6,000
Company B	Telecommunications and Media	36,000	28,000

In total, I collected data from 1,034 alumni across Company A (47% of the total sample), and Company B (53%). Alumni respondents were predominantly male (72%) and Caucasian (80%). The remaining respondents identified as Asian/Pacific Islander (10%), Multiple Races (4%), Hispanic/Latino (1%), and Black/African American (1%). Respondents also represented a variety of ages with 11% between the ages of 18-30, 19% between the ages of 31-40, 16% between the ages of 41-50, 20% between the ages of 51-60, 24% between the ages of 61-70, and 7% were 71 years of age or older. Respondents left the company for a variety of reasons such as voluntarily leaving for a new job (43%), restructuring or layoffs (35%), retirement (6%), or non-work reasons (i.e. family reasons or to go back to school; 8%). Only 3% of the alumni respondents had been terminated for cause. Alumni respondents left their former firms at a variety of levels including non-supervisors (30%), team leaders (21%), supervisors (14%), managers (20%), directors (9%), and executives (5%). Furthermore, while 65% of alumni respondents reported no direct working relationship with their former employer, 19% of the respondents were employed in client organizations, 7% were in supplier organizations, 1% were in distributor organizations, and 6% were employed by competitors. On average, alumni respondents had been out of the focal organizations for about 9 years and were employed at their former employer for about 13 years.

Measures

Alumni Motivation. Items were developed from established scales found in the functional motivation literature (Clary et al., 1998; Okun & Schultz, 2003) and adapted based on feedback from industry experts such as Alumni Co executives and partnering alumni program managers. Participants received the stem, “I am motivated to be part of the (company) alumni network because I want to:” and presented with three items for each of the four subdimensions (i.e. career, pragmatic, social, and mission-driven motivations). These items are presented in Appendix 1. Items were rated on a 5-point Likert scale (1= Strongly Disagree and 5= Strongly Agree).

In order to explore construct validity, I conducted exploratory and confirmatory analyses. I started by combining the data from Alumni Network A and Alumni Network B, randomly ordered the data, and splitting the data set in half. With the first half of the data (n= 517), I conducted exploratory factor analysis. Using the Principal Axis Factoring Extraction Method in Step 1, the results suggested there were four factors that accounted for 75.22% of the variance. In Step 2, I employed the Maximum Likelihood Extraction Method and Promax Rotation Method, and I found that none of the items produced a low (<.40) or double factor loading and the 12 items loaded onto 4 factors as expected (Table 3).

Table 3. Study 1 Exploratory Factor Analysis

	Factor 1	Factor 2	Factor 3	Factor 4
Car1	0.907	-0.042	-0.121	0.067
Car3	0.791	0.029	0.116	-0.069
Car2	0.784	0.053	0.026	-0.043
MD2	-0.063	0.931	-0.013	-0.023
MD1	0.039	0.793	-0.022	0.060
MD3	0.082	0.669	0.032	-0.004
Prag1	0.022	-0.078	0.852	-0.032
Prag2	-0.121	0.086	0.808	-0.039
Prag3	0.150	0.006	0.600	0.129
Soc1	-0.007	-0.075	0.017	0.966
Soc2	-0.015	0.006	-0.010	0.713
Soc3	-0.033	0.228	0.014	0.495

Notes: The data used for this EFA is half of the combined data from Company A and Company B.

This analysis used the Maximum Likelihood extraction method and the Rotation Method was Promax with Kaiser Normalization.

With the second half of the data (n=516), I conducted confirmatory factor analyses on the 12 items and found the four-factor structure composed of career motivation, social motivation, mission-driven motivation, pragmatic motivations had excellent fit to the data ($\chi^2_{(48)}=290.122$, $p < .01$; CFI= .93, TLI=.90, SRMR= .08) according to accepted cut-offs of $CFI > .90$ (Bentler, 1990). This model produced a significantly better fit than a 1 factor model ($\Delta\chi^2_{(6)} = 2,651.80$, $p < .01$), a 2 factor model where career and pragmatic motivations load onto a factor and social and mission-driven motivations load onto a factor ($\Delta\chi^2_{(5)} = 1,980.94$, $p < .01$), and a 3-factor model where career and pragmatic motivations load onto a single factor, and social and mission-driven motivations load onto two separate factors ($\Delta\chi^2_{(3)} = 1,258.40$, $p < .01$). The Mplus code for the 4-factor model is included in Appendix 2.

In addition to testing the 4-factor model with half of the combined data, I conducted confirmatory factor analyses using only Company A data (n= 478). The results from the CFA using Company A data produced excellent fit to the data ($\chi^2_{(48)}=217.75$, $p < .01$; CFI= .92, TLI=.89, SRMR= .06). I then examined the 4-factor model using only Company B data (n=551). The results from the CFA using Company B data also produced excellent fit to the data ($\chi^2_{(48)}=185.79$, $p < .01$; CFI= .96, TLI=.95, SRMR= .05).

To examine reliability, in addition to the commonly reported Cronbach's alpha, I present two additional measures of reliability: McDonald's Omega, also known as Omega Total, and the Greatest Lower Bound measure (GLB; Jackson & Agunwamba, 1977). I include these additional reliability measures as some have argued that Cronbach's alpha cannot fully be relied upon as it underestimates reliability and requires tau equivalence (Hattie, 1985; McNeish, 2018). Omega total is conceptually similar to Cronbach's alpha, but can be extended to consider design-driven error covariances (McNeish, 2018). GLB aims to "determine the maximal values for the error component of the observed scores that is consistent with the data because reliability calculated with these maximum errors will yield the lowest possible value for reliability" (McNeish, 2018: 418).

To calculate these three reliability measures, I used JASP 0.9.2.0 which is an open-source project supported by the University of Amsterdam (<https://jasp-stats.org/>). Reliability testing produced results as follows: Career Motivation $\alpha = .85$, $\omega = .86$, GLB= .87; Social Motivation $\alpha = .81$, $\omega = .82$, GLB= .85; Mission-Driven Motivation $\alpha = .86$, $\omega = .87$, GLB= .88; Pragmatic Motivation $\alpha = .81$, $\omega = .81$, GLB= .84. Similar to cutoff points for Cronbach's alpha, reliability values for Omega Total and GLB are considered to be acceptable above .70 (McNeish, 2018).

Alumni Program Involvement. Given the lack of research on corporate alumni programs, I adopted a systems perspective to understand the outcomes associated with alumni programs. Similar to logic used in strategic human resource management (SHRM) research (e.g. Batt, 2002; MacDuffie, 1995), I used an additive index to measure corporate alumni program involvement. The use of an additive index rests on the assumption that the alumni program is a combination or system of alumni practices, and because alumni are exposed to multiple practices simultaneously, the effectiveness of any particular practice may depend on the use or availability of other practices in place (Delery, 1998; Jiang et al., 2012; Lepak, Liao, Chung, & Harden, 2006; Wright & Boswell, 2002; Wright & McMahan, 1992).

Participants were asked about their use of 12 different alumni offerings: the alumni portal, the member directory, the news page, messaging features, jobs board, groups page, benefits/perks page, alumni-focused social networking sites, webinars or web-based events, and in-person events. Alumni program participation was measured as a percent of the number of benefits used out of 12. The distributions of alumni program use was as follows: 19% used 0 benefits, 11% used 1 benefit, 14% used 2 benefits, 13% used 3 benefits, 11% used 4 benefits, 10% used 5 benefits, 8% used 6 benefits, 6% used 7 benefits, 3% used 8 benefits, 2% used 9 benefits, 1% used 10 benefits, 1% used 11 benefits, and 2% used all 12 benefits.

Post-Employment Citizenship. I drew from prior measures of *alumni goodwill* (i.e. "willingness to speak publicly and highly about them, to hold positive views of them as employers, and to consider returning to them as employees in the future"; Raghuram et al., 2017, p. 405) and *post-employment citizenship* (i.e. "the proclivity of ex-employees to benefit their former firm"; Herda & Lavelle, 2011, p.156) to measure PEC. Respondents were presented with the stem, "How likely it is that you would:" and then asked about the

likelihood of recommending the company's products and/or services and the company as a place to work. In line with net promoter scoring, the items were evaluated on an eleven-point scale (0 = Not likely at all and 10 = Extremely Likely).

I conducted additional confirmatory factor analyses to examine the factor structure including the motivation items. When using the data set that contains the randomly split data from Company A and B, the results for the 5-factor model (i.e. the four motivations and PEC) suggest an appropriate fit to the data ($\chi^2_{(67)}=358.94$, $p < .01$; CFI= .93, TLI=.90, SRMR= .08). The Mplus code for this 5-factor model using the randomly split data is included in Appendix 3. Results from confirmatory factor analyses using Company A data ($\chi^2_{(67)}= 256.32$, $p < .01$; CFI= .93, TLI=.91, SRMR= .06) and using Company B data ($\chi^2_{(67)}=250.78$, $p < .01$; CFI= .96, TLI=.94, SRMR= .05) also produced excellent fit statistics.

I conducted reliability analyses for PEC but could not calculate a score for GLB as this test cannot be computed for less than three items. Therefore, the Cronbach's $\alpha = .82$ and $\omega = .82$.

Controls. I controlled for time since departure, tenure at the organization, and exit status in terms of layoffs. In line with recent calls to only include control variables that are theoretically justified and present alternative explanations to key relationships (Becker et al., 2015), I provide explanations for my choice of control variables. To start, prior research has argued that because men and women occupy different societal roles with different expectations and norms, they are likely to diverge in their motivations (Diekmann & Eagly, 2008). Because of the importance of motivations in this research, I thus control for sex (female =1, male=0). Furthermore, evidence from prior research examining the role of identification (Iyer et al., 1997; Mael & Ashforth, 1992) and perceived organizational fairness

(Herda & Lavelle, 2011) in determining alumni's willingness to support a former organization has found that tenure at the firm, time since departure, and exit status are significant variables in these relationships. To assess tenure, respondents were asked to provide the number of years and months they were employed at the organization. To measure time elapsed since departure, respondents were asked to report the year they left the organization. I subtracted the reported year from the current year to arrive at the number of years since departure. Finally, in line with prior research (Herda & Lavelle, 2011), exit status was measured as a dummy variable where lay-off was coded as a one.

STUDY 1 RESULTS

The means, standard deviations, and correlations among study variables are presented in Table 4.

Table 4. Study 1 Means, Standard Deviations, and Correlations

	Mean	SD	1	2	3	4	5	6
1 Career Motivation	3.50	0.97	-					
2 Social Motivation	3.90	0.78	0.19 **					
3 Mission-Driven Motivation	3.34	0.85	0.30 **	0.47 **				
4 Pragmatic Motivation	3.52	0.95	0.10 **	0.26 **	0.44 **			
5 Female	0.25	0.43	0.13 **	0.10 **	0.07 *	0.05		
6 Alumni Program Involvement	0.28	0.24	0.05	0.15 **	0.17 **	0.07 *	-0.08 *	
7 Post-Employment Citizenship	7.14	2.15	0.31 **	0.33 **	0.47 **	0.30 **	0.03	0.20 **
8 Exit- New Job	0.43	0.50	0.18 **	-0.02	-0.11 **	-0.22 **	0.03	-0.06
9 Exit- Layoff	0.36	0.48	-0.15 **	0.02	0.11 **	0.28 **	-0.07 *	0.08 *
10 Time Since Departure	9.71	6.81	-0.14 **	0.14 **	0.05	0.01	-0.12 **	0.04
11 Tenure	13.55	12.83	-0.43 **	0.11 **	0.12 **	0.27 **	-0.19 **	0.11 **
12 Current Employment- Partner	0.27	0.44	0.21 **	0.00	0.06 *	-0.02	-0.04	0.03
13 Current Employment- Competitor	0.06	0.23	0.05	-0.01	-0.08 **	-0.11 **	-0.04	-0.04
			8	8	9	10	11	12
8 Exit- New Job			-0.01					
9 Exit- Layoff			-0.01	-0.65 **				
10 Time Since Departure			0.00	-0.03	0.08 **			
11 Tenure			0.01	-0.42 **	0.44 **	0.16 **		
12 Current Employment- Collaborator			0.14 **	0.17 **	-0.10 **	-0.01	-0.17 **	
13 Current Employment- Competitor			-0.05	0.10 **	-0.07 *	-0.07 *	-0.12 **	-0.15 **

Notes: Career, Social, Mission-Driven, and Pragmatic Motivations were measured on a 5-point likert scale. Female, Exit- New Job, Exit- Layoff, Current Employment- Partner, and Current Employment-Competitor are dummy coded. Alumni Program Involvement was measured as a percent of benefits out of 12 total offerings. Post-Employment Citizenship was measured with an 11-point scale (0= Not at all likely, 10 = Extremely likely). Time Since Departure and Tenure were measured in years.

*p<.05, ** p<.01

Measurement Invariance Testing

Because the data in Study 1 was collected from two alumni groups, Company A and Company B, I conducted measurement invariance and structural invariance tests (Vandenberg & Lance, 2016). Measurement equivalence testing is important to ensure there is conceptual equivalence underlying the theoretical variables in each of the alumni networks, there are equivalent association between the operationalizations and across groups, and that these variables are being influenced to the same extent across groups (Vandenberg & Lance, 2016). In other words, measurement invariance tests should demonstrate whether the alumni motivations and PEC are interpreted in a conceptually similar manner across respondents in the alumni networks of Company A and Company B. To conduct this analysis, I followed recommended practices (Vandenberg & Lance, 2016) and tested for measurement invariance (i.e. configural invariance, metric invariance, scalar invariance, and invariant uniqueness) and then followed with structural invariance (i.e. invariant factor variances, invariant factor covariance, invariant factor means).

Using Mplus (version 8; Muthén & Muthén, 2017), I conducted measurement invariance tests for the motivation constructs (i.e. career, social, mission-driven, and pragmatic motivations) as well as the PEC construct. In line with recommendations (Marsh et al., 2009; Meredith, 1993; Vandenberg & Lance, 2016), I started by testing for configural invariance which examines whether the pattern of free and fixed factor loadings of the measurement items are equivalent across groups (Horn & McArdle, 1992), and the Mplus code for the base configural invariance test is in Appendix 4. As seen in Table 4, the results for the configural invariance test did not produce acceptable measures (SRMR= 2.74, RMSEA= .15, CFI= .68, TLI= .58). While additional tests of measurement invariance are not justified, I conducted the

next steps for Measurement Invariance tests (Table 5), and, as expected, the results of the fit statistics did not significantly improve and became much worse as the SRMR and RMSEA increased and the CFI and TLI decreased.

One reason for the low equivalence results may be because of the different “cultures” of the alumni networks. Generally, alumni from Company A report greater social and career motivations while pragmatic motivations are the weakest motivators. In contrast, alumni from Company B report greater pragmatic and social motivations while career motivations are the weakest drivers for this group. This appears to be a critical difference that may be driving the poor measurement invariance results.

Table 5. Motivations and PEC Measurement Invariance Test Comparing Company A and Company B

Model	df	Log-Likelihood	# params	Scale	SRMR	RMSEA	CFI	TLI
1. Configural Invariance	139	-19062.242	99	1.36	2.74	0.15	0.68	0.58
2. Metric Invariance	148	-19870.605	90	1.28	3.05	0.19	0.46	0.33
3. Scaler Invariance	157	-20023.921	81	1.34	3.59	0.20	0.40	0.30
4. Invariant Uniqueness	171	-20113.473	67	1.25	3.57	0.19	0.39	0.35
5. Invariant Factor Variances	176	-20285.243	62	1.30	3.22	0.19	0.33	0.31
6. Invariant Factor Covariances	186	-20394.649	52	1.27	3.39	0.19	0.31	0.32
7. Invariant Factor Means	186	-20394.649	52	1.27	3.39	0.19	0.31	0.32

Notes: Measurement Invariance analyses is examining the equivalence between Company A and Company B of the alumni motivations and the PEC constructs. Co A # of observations = 480. Co B # of observations = 551. Total # of observations = 1,031

Table 6. Measurement Invariance Tests: Comparison of Fuller versus Restricted Models

Model Comparison	Fuller Model			Restricted Model			Rescaled -2ΔLL
	Log- Likelihood	#p's	Scale	Log- Likelihood	#p's	Scale	
1. Configural Invariance vs. Metric Invariance	-19062.242	99	1.365	-19870.605	90	1.279	727.34
2. Metric Invariance vs. Scaler Invariance	-19870.605	90	1.279	-20023.921	81	1.343	437.86
3. Scaler Invariance vs. Invariant Uniqueness	-20023.921	81	1.343	-20113.473	67	1.249	99.70
4. Invariant Uniqueness vs. Invariant Factor Variances	-20113.473	67	1.249	-20285.243	62	1.297	533.88
5. Invariant Factor Variances vs. Invariant Factor Covariances	-20285.243	62	1.297	-20394.649	52	1.270	151.97
6. Invariant Factor Covariances vs. Invariant Factor Means	-20394.649	52	1.270	-20394.649	52	1.270	0.00

Notes: Measurement Invariance analyses is examining the equivalence between Company A and Company B of the alumni motivations and the PEC constructs. Co A # of observations = 480. Co B # of observations =551. Total # of observations = 1,031

Hypotheses Testing

Differences in outcomes between users and non-users. In order to examine Hypothesis 1, involvement with the alumni program will be positively associated with post-employment citizenship, I started by first examining the differences in PECs between users and non-users of the alumni program by conducting an independent samples t-test. Results from these tests indicate that positive benefits are associated with use of at least one alumni program benefit. Specifically, alumni who use at least 1 benefit (M= 7.31, SD= 2.15) have a significantly greater likelihood of recommending the company's products and services compared to alumni who do not use any of the alumni program benefits (M= 6.60, SD= 2.57; $t(1022)= 3.96, p<.001$). Additionally, alumni who use at least 1 benefit (M= 7.22, SD= 2.33) have a significantly greater likelihood of recommending the company as a place to work compared to alumni who do not use any of the alumni program benefits (M= 6.62, SD= 2.75; $t(1023)= 3.10, p<.01$). These results provide initial support for Hypothesis 1.

Because the combined data did not pass the measurement invariance test, I also examined the differences in likelihood of recommendations for users and non-users in the 2 groups separately. In Company A, I found similar results such that alumni who use at least 1 benefit (M= 7.04, SD= 2.13) have a significantly greater likelihood of recommending the company's products and services compared to alumni who do not use any of the alumni program benefits (M= 6.19, SD= 2.48; $t(476)= 3.19, p<.01$). Additionally, alumni who use at least 1 benefit (M= 7.34, SD= 2.24) have a significantly greater likelihood of recommending the company as a place to work compared to alumni who do not use any of the alumni program benefits (M= 6.53, SD= 2.60; $t(476)= 2.90, p<.01$).

When conducting the t-tests in Company B, alumni who used at least 1 benefit (M= 7.55, SD= 2.14) appeared to have a significantly greater likelihood of recommending the company's products and services compared to alumni who did not use any of the alumni program benefits (M= 6.89, SD= 2.60; $t(544)= 2.75, p<.01$). Notably, I did not find a significant difference when examining differences between alumni who used at least 1 benefit (M=7.11, SD= 2.41) and alumni who did not use any benefits in the likelihood of recommending the company as a place to work (M= 6.69, SD= 2.87; $t(545)= 1.58, p= .115$). While the difference is not significant, the users of alumni benefits still reported a higher likelihood of recommending the company as a place to work compare to non-users. The lack of support for a difference between users and non-users in the likelihood of recommending the company as a place to work in Company B appears to be because there is a lower likelihood overall regardless of alumni program involvement.

Structural Equation Models. After receiving initial support for the first hypothesis using the combined data, I tested all hypotheses simultaneously with structural equation modeling (SEM) in Mplus (version 8; Muthén & Muthén, 2017) using maximum likelihood estimation with robust standard errors. Because tenure and time since departure are both time-based and may be inversely related, I allowed the error terms for these variables to correlate. I first ran a fully mediated model in line with the hypotheses, and the model produced a poor fit to the data ($\chi^2_{(153)}= 1,093.53, p<.01, CFI= .88, RMSEA= .08, SRMR= .09$). However, a partially mediated model ($\chi^2_{(149)}=816.42, p<.01, CFI= .91, RMSEA= .07, SRMR= .05$) fit the data significantly better ($\Delta\chi^2_{(4)} = 277.11, p<.01$), and I therefore retained the partial mediation model for hypotheses testing. The standardized path estimates are displayed in Table 7 and the Mplus code is in Appendix 5.

Table 7. Combined Data: Standardized Estimates from the Structural Equation Model

	<i>Dependent Variables</i>				
	Participation in Alumni Network			Post-Employment Citizenship	
	β		s.e.	β	s.e.
<i>Control Variables</i>					
Female	-0.08	*	0.03	-0.02	0.03
Exit- New Job	0.00		0.04	-0.03	0.04
Exit- Layoff	0.04		0.04	-0.10	* 0.04
Time Since Departure	0.00		0.03	-0.01	0.03
Tenure	0.09	*	0.04	0.01	0.04
Current Employment- Partner	0.02		0.03	0.09	** 0.03
Current Employment- Competitor	-0.02		0.03	0.01	0.03
<i>Predictors</i>					
Career Motivation	H2	0.06	0.05	0.19	** 0.04
Pragmatic Motivation	H3	-0.06	0.04	0.15	** 0.04
Social Motivation	H4	0.08	* 0.04	0.12	** 0.04
Mission-Driven Motivation	H5	0.12	* 0.05	0.33	** 0.05
Alumni Program Involvement	H1	0.12	** 0.03		

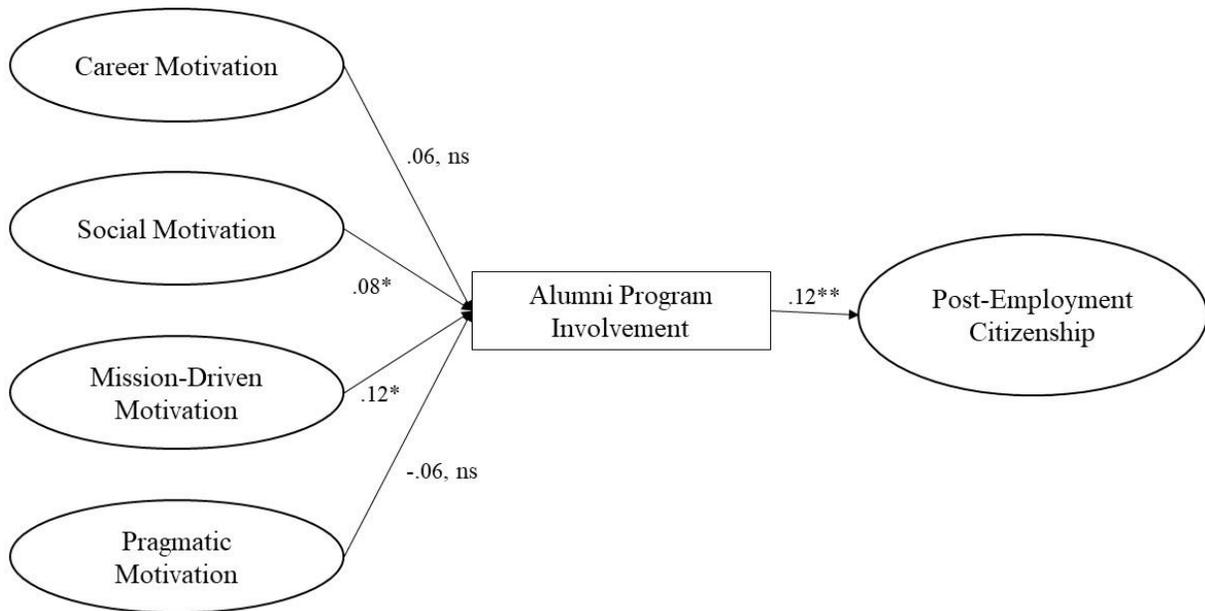
Note: This model includes the combined data for Company A and Company B. Standardized estimates are reported in the table. # of observations =1,034. CFI= .91, RMSEA= .07, SRMR= .05

** $p < .01$, * $p < .05$

Guided by social exchange principles, I proposed that an individual's involvement with an alumni program would elicit desirable outcomes from alumni in the form of PEC and anticipated that there would be a positive association. As expected, there is a positive and significant association between involvement in the alumni program and PEC ($b=.12, p<.001$) supporting Hypothesis 1. Due to the voluntary nature of post-employment relationships, however, I argued for the importance of exploring the motivations that prompt alumni to re-engage with their former employers. I proposed that alumni might get involved with programs provided by their former employers because they were motivated by career, pragmatic, social, or mission-driven goals. Results suggest that Social Motivations ($b=.08, p<.05$) and Mission-Driven Motivations ($b=.12, p<.05$) are positively and significantly associated with alumni program involvement, supporting Hypotheses 4 and 5, respectively. However, failing to support Hypotheses 2 and 3, Career Motivations and Pragmatic Motivations were not significantly associated with alumni program involvement.

Because prior research on motivations found others-oriented motivations were more effective at driving behaviors than self-oriented motivations, I also argued it would be unlikely for alumni motivations to be equally effective in driving alumni program involvement. As such, I expected that Mission-Driven Motivations would have the strongest association with involvement. I calculated the z-score to test whether there was a significant difference between Social Motivations and Mission-Driven Motivations. Findings showed that Mission-Driven motivations did not have a significantly stronger association with Alumni Program Involvement compared to Social Motivations ($z=0.57, p= .28$). Therefore, Hypothesis 6 was not supported.

Figure 2. Hypothesized Model with Standardized Estimates



Note: **p<.01, *p<.05

Due to the poor fit statistics in the measurement invariance tests, I also conducted separate structural equation model analyses for each of the corporate alumni networks. I used the same code for the partially mediated model for Company A and Company B. Similar to the model with the combined data, the partially mediated model produced acceptable fit statistics for the data ($\chi^2_{(149)} = 444.66$, $p < .01$, CFI = .90, RMSEA = .06, SRMR = .05). Regarding Company B, the partially mediated model also fit the data well ($\chi^2_{(149)} = 405.45$, $p < .01$, CFI = .94, RMSEA = .06, SRMR = .04). The comparison of the standardized path estimates for Company A, Company B, and the combined data are displayed in Table 8.

Table 8. Comparison of Standardized Path Estimates from Structural Equation Models

	Combined <i>Dependent Variables</i>				Company A <i>Dependent Variables</i>				Company B <i>Dependent Variables</i>				
	Participation in Alumni Network		Post-Employment Citizenship		Participation in Alumni Network		Post-Employment Citizenship		Participation in Alumni Network		Post-Employment Citizenship		
	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	
<i>Control Variables</i>													
Female	-0.08 *	0.03	-0.02	0.03	-0.06	0.05	-0.11 **	0.04	-0.11 *	0.04	0.07	0.04	
Exit- New Job	0.00	0.04	-0.03	0.04	0.04	0.05	-0.02	0.05	-0.06	0.06	-0.06	0.06	
Exit- Layoff	0.04	0.04	-0.10 *	0.04	0.05	0.05	-0.13 **	0.05	-0.01	0.06	-0.08	0.06	
Time Since Departure	0.00	0.03	-0.01	0.03	0.08	0.05	-0.08	0.04	-0.05	0.04	0.07	0.04	
Tenure	0.09 *	0.04	0.01	0.04	0.13 *	0.05	0.07	0.05	0.03	0.05	-0.02	0.05	
Current Employment- Partner	0.02	0.03	0.09 **	0.03	-0.01	0.05	0.07	0.04	0.02	0.05	0.05	0.04	
Current Employment- Competitor	-0.02	0.03	0.01	0.03	-0.03	0.05	-0.01	0.04	0.02	0.04	0.01	0.04	
<i>Predictors</i>													
Career Motivation	H2	0.06	0.05	0.19 **	0.04	0.22 **	0.07	0.34 **	0.06	-0.03	0.06	0.00	0.06
Pragmatic Motivation	H3	-0.06	0.04	0.15 **	0.04	-0.08	0.06	0.08	0.05	-0.06	0.07	0.25 **	0.07
Social Motivation	H4	0.08 *	0.04	0.12 **	0.04	0.07	0.07	0.19 **	0.06	0.07	0.06	-0.08	0.06
Mission-Driven Motivation	H5	0.12 *	0.05	0.33 **	0.05	0.05	0.06	0.20 **	0.06	0.20 **	0.08	0.48 **	0.07
Alumni Program Involvement			H1	0.12 **	0.03			0.10 *	0.04			0.11 **	0.04

** $p < .01$, * $p < .05$

Note: This model includes the combined data for Company A and Company B.

Standardized estimates are reported in the table. # of observations =1,034.

CFI= .91, RMSEA= .07, SRMR= .05

Consistent with the findings in the combined data, Hypothesis 1 is supported in both Company A and B data. There is a positive relationship between alumni program involvement and PEC. Regarding Hypotheses 2-5, Company A data suggests that in this alumni network, career motivations are the only driver of increased participation in the alumni network. In contrast, Company B data suggests Mission-Driven motivations are the only motivations that significantly increase the use of the alumni program. These findings lend insight into why the measurement invariance tests produced poor fit statistics. Further discussion of these results is continued in the Study 1 discussion section.

Study 1 Exploratory Analyses

While results from the analyses for the proposed set of hypotheses and research questions provided foundational insight, the findings also introduced new questions. The weak fit statistics in the measurement invariance analyses and the lack of support for the relationships between alumni program involvement and the career and pragmatic motivations warrant additional post-hoc analyses. It seems unlikely that career and pragmatic motivations are not influential drivers of participation in alumni programs in light of conversations with alumni managers who often argue career motivations are the strongest drivers. One reason these relationships are not significant may be due to research design, particularly the way in which the alumni program involvement construct was operationalized. It may be that increased social and mission-driven motivations leads to involvement in a wider range of alumni benefits while increase career and pragmatic motivations leads to greater use of specific types of alumni benefits. Given the findings from the measurement invariance analyses, another possible reason why these relationships are not significant may be due to

differences in the alumni networks themselves. It is possible that there are significant within-alumni program variations that mask nuanced relationships once the data is aggregated. To examine these reasons, I conducted post-hoc analyses to examine the relationships between the motivations and involvement with individual alumni practices as well as difference in motivations and alumni program involvement by alumni network.

Relationships between Alumni Motivations and Alumni Program Involvement.

To explore the possibility that the type and extent of involvement differs by motivation I conducted analyses that examined whether there are significant differences in motivations based on use or non-use of the *individual* benefits.

As seen in Table 9, it is likely that the relationship between motivations and alumni benefit use is more nuanced than previously hypothesized. A detailed analysis of the relationship between the four motivations and use shows mission-driven motivations are significantly stronger for users compared to non-users for ten different benefits, and social motivations are significantly stronger for users versus non-users for seven different benefits.

In contrast, career motivations and pragmatic motivations are only stronger for users compared to non-users for four types of benefits. However, the difference in strength of career motivations and pragmatic motivations is particularly strong for users of the job board and benefits page, respectively. As such, these results indicate individuals with stronger career or pragmatic motivations are not driven to use a wide range of benefits but instead use specific benefits more frequently or intensely. Unfortunately, the current data is not suitable for testing frequency of individual benefit use as the items were measured with a dichotomous rather than continuous scale.

Table 9. Study 1 Exploratory Analyses: Associations between Motivations and Specific Benefit Use

	<u>Alumni Portal</u>			<u>Member directory</u>				<u>News Page</u>		
	Use	Not Use	Mean	Use	Not Use	Mean	Use	Not Use	Mean	
			difference			difference			difference	
Average Career Motivation	3.52	3.47	0.05	3.49	3.50	0.00	3.50	3.49	0.01	
Average Social Motivation	3.98	3.82	0.15 **	4.03	3.86	0.18 **	4.01	3.85	0.17 **	
Average Mission-Driven Motivation	3.98	3.82	0.15 **	3.48	3.29	0.19 **	3.52	3.25	0.26 **	
Average Pragmatic Motivation	3.62	3.41	0.21 **	3.56	3.50	0.06	3.65	3.46	0.19 **	
	<u>Messaging</u>			<u>Job Board</u>				<u>Groups</u>		
	Use	Not Use	Mean	Use	Not Use	Mean	Use	Not Use	Mean	
			difference			difference			difference	
Average Career Motivation	3.33	3.51	-0.19	3.84	3.39	0.45 **	3.23	3.53	-0.30 **	
Average Social Motivation	3.91	3.90	0.01	3.90	3.90	-0.01	4.10	3.88	0.23 **	
Average Mission-Driven Motivation	3.51	3.32	0.19 *	3.39	3.33	0.07	3.63	3.30	0.33 **	
Average Pragmatic Motivation	3.64	3.51	0.14	3.45	3.54	-0.09	3.80	3.48	0.32 **	
	<u>Benefits</u>			<u>Social Networking Sites</u>				<u>Alumni Newsletter</u>		
	Use	Not Use	Mean	Use	Not Use	Mean	Use	Not Use	Mean	
			difference			difference			difference	
Average Career Motivation	3.30	3.58	-0.27 **	3.71	3.41	0.29 **	3.58	3.41	0.17 **	
Average Social Motivation	3.92	3.89	0.03	3.97	3.88	0.09	3.96	3.84	0.12 *	
Average Mission-Driven Motivation	3.49	3.28	0.21 **	3.39	3.32	0.06	3.40	3.28	0.11 *	
Average Pragmatic Motivation	3.94	3.34	0.59 **	3.44	3.55	-0.11	3.49	3.55	-0.07	
	<u>Individualized Emails</u>			<u>Webinar</u>				<u>In-person Events</u>		
	Use	Not Use	Mean	Use	Not Use	Mean	Use	Not Use	Mean	
			difference			difference			difference	
Average Career Motivation	3.54	3.48	0.06	3.59	3.49	0.10	3.59	3.45	0.14 *	
Average Social Motivation	4.05	3.84	0.20 **	3.95	3.90	0.05	4.17	3.77	0.40 **	
Average Mission-Driven Motivation	3.54	3.26	0.28 **	3.62	3.31	0.30 **	3.44	3.29	0.15 **	
Average Pragmatic Motivation	3.51	3.52	-0.01	3.64	3.51	0.13	3.40	3.58	-0.19 **	

Notes: Career motivation is significantly stronger for users than for non-users for 4 types of benefits. Social motivation is significantly stronger for users than for non-users for 7 types of benefits. Mission-Driven motivation is significantly stronger for users than for non-users for 10 types of benefits. Pragmatic motivation is significantly stronger for users than for non-users for 4 types of benefits.

**p<.01, *p<.05

Alumni Motivations and Alumni Program Involvement by Alumni Network. To explore the second possibility, that there are alumni network-specific differences in motivations and alumni program involvement, I examined the patterns of motivations for the two alumni networks. As seen in Table 10, there are significant differences between alumni in the two networks for career, mission-driven, and pragmatic motivations. Notably, the differences in motivation are not in consistent directions. Alumni in Company A (M= 3.82, SD= .78) reported significantly stronger career motivations than alumni in Company B (M= 3.21, SD= 1.04, $t(1,020)= 10.62, p<.001$). In contrast, alumni in Company A reported significantly weaker mission-driven motivations (M= 3.20, SD= .84) and pragmatic motivations (M= 3.03, SD= .92) when compared to Company B mission-driven motivations (M=3.47, SD= .84, $t(1,019)= -5.14, p<.001$) and pragmatic motivations (M= 3.95, SD= .76, $t(1,023)= -17.43, p<.001$). These results also indicate there are no significant differences between the two alumni networks for social motivations.

Table 10. Study 1 Exploratory Analysis: Comparison of Motivations for Company A and Company B

	Career Motivation	Social Motivation	Mission-Driven Motivation	Pragmatic Motivation
Company A	3.82	3.92	3.20	3.03
Company B	3.21	3.89	3.47	3.94
Mean Difference	0.62	0.04	-0.27	-0.91
p-value	0.00	0.46	0.00	0.00

In addition to alumni motivations, I examined differences in alumni program involvement based on the alumni network. As seen in Table 11, there were significant differences between Company A and Company B for ten out of the twelve alumni practices. Similar to the findings for motivations, the differences were not consistently in the same direction. Alumni in Company A have significantly higher involvement in four of the alumni

practices: the job board, other social networking sites, the alumni newsletter, and in-person events. In contrast, alumni in Company B have significantly higher involvement six alumni practices: the alumni portal, the news page, messaging features, groups pages, benefits/perks, and the webinar. Out of the twelve alumni practices, Company A and Company B did not significantly differ for only two of the alumni practices: individualized emails and the member directory.

While t-test analyses highlighted the differences between the alumni networks, a comparison of the most used alumni practices demonstrated similarities between the alumni networks. The most used alumni practices in Company A were the alumni newsletter (58%), in-person events (43%), and the alumni portal (44%). The most used alumni practices in Company B were the alumni portal (59%), benefits/perks (49%), and the alumni newsletter (46%). These findings indicate that the alumni portal and the newsletter are widely used by alumni regardless of alumni network.

Table 11. Study 1 Exploratory Analysis: Comparison of Alumni Program Involvement for Company A and Company B

	Alumni Portal	Directory	News Page	Messaging	Job Board	Groups
Company A	0.44	0.26	0.27	0.05	0.27	0.05
Company B	0.59	0.27	0.39	0.12	0.18	0.18
Mean Difference	-0.15	-0.01	-0.12	-0.07	0.09	-0.13
p-value	0.00	0.77	0.00	0.00	0.00	0.00

	Benefits/ Perks	Social Networking Sites	Newsletter	Individualized Emails	Webinars	In-Person Events
Company A	0.08	0.34	0.58	0.31	0.07	0.43
Company B	0.49	0.23	0.46	0.28	0.11	0.24
Mean Difference	-0.41	0.11	0.12	0.03	-0.04	0.19
p-value	0.00	0.00	0.00	0.23	0.05	0.00

I propose two potential reasons for the differences in alumni motivations based on alumni network. First, the variations in alumni responses may be a result of prior employment processes that selected certain types of individuals into the parent organization as research has suggested individuals are sorted into different organizations during the recruitment and selection process (Breugh, 2013; Rynes, 1991; Schneider, 1987; Schneider, Goldstein, & Smith, 1995). For example, Rynes offered a self-selection hypothesis such that “variations in recruitment practices create differences in the type of individual who enters the organization in the first place” (Rynes, 1991: 11). Following this logic, individuals may have self-selected into different organizations based on their inherent motivations. It may be that individuals who are strongly motivated by career goals were more likely to enter recruitment and be selected for employment at Company A while alumni who are strongly motivated by mission-driven and pragmatic motivations were more likely to be employed at Company B. Thus, the effects from recruitment and selection processes that sort individuals into different organizations may have extended into the alumni networks influencing the ways in which the alumni in the two networks interpret the scale items.

An alternative explanation for the differences in motivations may be due to the structure of the alumni networks themselves. A substantial body of work motivation literature argues that the work structure is a key factor in enhancing or reducing employees’ work motivations (Hackman & Oldham, 1976; Herzberg, Mausner, & Snyderman, 1959; Vroom, 1964). For example, in the classic Motivator-Hygiene Theory (1959), Herzberg argues that elements in the work context are key to worker satisfaction and enhancing motivation. While certain work elements (i.e. hygiene factors) can prevent employee dissatisfaction, other work elements (i.e. growth needs factors) lead to employee satisfaction and increase motivation.

Hackman and Oldham (1976) argued core features of the job impact employee motivation by shaping psychological states. More recently, scholars have argued that certain HR practices shape employee motivation in the abilities, motivation, and opportunities (AMO) model (Jackson, Schuler, & Jiang, 2013; Jiang et al., 2012; Lepak et al., 2006).

These work motivation frameworks suggest that aspects of the alumni program are influential in shaping individual motivations to participate. In other words, the structure of the alumni program might influence alumni motivations that subsequently affect alumni involvement in the program. If Company A offers valuable professional opportunities through their job board or networking opportunities, alumni may see these as being valuable to achieving their goals and subsequently increase career motivations. In contrast, Company B may provide strong mission-related practices or superior discounts and perks enhancing the mission-driven and pragmatic motivations, respectively. Unfortunately, the current structure of the research design does not support exploration into these underlying differences in motivation by alumni network.

Post-Employment Citizenship. I chose to focus the PEC measure in this study on ambassador outcomes. As discussed previously, the focus on ambassador outcomes was guided by the consistency of these items in prior alumni outcome measures (Herda & Lavelle, 2011; Iyer, 1998; Mael & Ashforth, 1992; Raghuram et al., 2017) and because these outcomes are unrestricted by employment or supervisory status. However, given prior practitioner and researcher interest in employment and business development outcomes, I conducted post-hoc analyses to explore the relationships between alumni program involvement and items focusing on these two types of outcomes.

Using ordinary least squares (OLS) regression, I controlled for time since departure, tenure, exit for a new job, exit from a layoff, new job at a collaborator, new job at a competitor, sex, and the four alumni motivations. Next, I examined the relationship between alumni program involvement and the additional outcomes of likelihood of (a) applying to be re-hired, (b) applying to do contract or freelance work, (c) developing new B2B relationships for the organization, (d) providing industry insights or intelligence to a current employee, and (e) participating in mentoring programs. As seen in Table 12a, 12b, and 12c, after controlling for other variables there was no significant relationship between alumni program involvement and the additional outcomes.

Supporting my prior argument, one reason these relationships may have failed to reach significance may have to do with the restrictions on alumni's abilities to perform these outcomes. For example, a retired alum will likely never apply for re-hire, and thus, it would be unlikely to find a significant relationship between alumni program involvement and this outcome. Similarly, an alum who no longer works in the same industry may not have the ability to develop new B2B relationships for the organization or share industry intelligence with a current employee, and thus, increasing involvement with the alumni program would not affect these outcomes.

Table 12a. Study 1 Exploratory Analysis: Relationships between Alumni Program Involvement and Additional Outcomes

	DV = Apply for rehire								DV = Contract or freelance work							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	.01	.01	.01	.37	.01	.01	.01	.37	.00	.01	-.01	-.26	.00	.01	-.01	-.26
Tenure	-.03	.01	-.11	-3.02 **	-.03	.01	-.10	-2.93 **	-.02	.01	-.06	-1.58	-.02	.01	-.06	-1.55
Exit- New Job	-.19	.25	-.03	-.75	-.19	.25	-.03	-.78	-.12	.27	-.02	-.46	-.13	.27	-.02	-.47
Exit- Layoff	.81	.26	.12	3.15 **	.81	.26	.12	3.15 **	.63	.28	.09	2.25 *	.63	.28	.09	2.25 *
New Employer- Collaborator	.66	.21	.09	3.15 **	.66	.21	.09	3.17 **	.20	.23	.03	.89	.20	.23	.03	.89
New Employer- Competitor	1.02	.40	.07	2.53 *	1.01	.40	.07	2.51 *	.07	.43	.01	.16	.07	.43	.01	.16
Female	.29	.21	.04	1.37	.27	.21	.04	1.28	-.19	.23	-.03	-.83	-.20	.23	-.03	-.85
Career Motivation	1.31	.11	.39	11.72 **	1.31	.11	.39	11.75 **	1.19	.12	.35	9.83 **	1.19	.12	.35	9.83 **
Social Motivation	-.50	.13	-.12	-3.82 **	-.49	.13	-.12	-3.74 **	-.20	.14	-.05	-1.39	-.19	.14	-.05	-1.37
Mission-Driven Motivation	.51	.13	.13	3.88 **	.52	.13	.14	3.96 **	.53	.14	.14	3.78 **	.54	.14	.14	3.79 **
Pragmatic Motivation	.74	.11	.21	6.76 **	.73	.11	.21	6.71 **	.39	.12	.11	3.35 **	.39	.12	.11	3.34 **
Alumni Program Involvement					-.03	.03	-.03	-.97					-.01	.03	-.01	-.32
R^2	.33				.08				.21				.21			
$F(df)$	41.08 (11,939)				37.74 (12,938)				23.25 (11,938)				21.30 (12,937)			
ΔR^2	.33				.05				.21				.21			

* $p < .05$, ** $p < .01$

Table 12b. Study 1 Exploratory Analysis: Relationships between Alumni Program Involvement and Additional Outcomes

	DV = Develop new B2B relationships								DV = Provide industry insights to a current employee							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.02	.01	-.06	-1.93	-.02	.01	-.06	-1.94	-.03	.01	-.07	-2.49 *	-.03	.01	-.08	-2.50 *
Tenure	.00	.01	-.02	-.43	.00	.01	-.02	-.52	-.01	.01	-.03	-.74	-.01	.01	-.03	-.85
Exit- New Job	-.18	.22	-.03	-.82	-.17	.22	-.03	-.79	.09	.23	.02	.41	.10	.23	.02	.45
Exit- Layoff	-.26	.23	-.04	-1.12	-.26	.23	-.04	-1.11	-.03	.24	-.01	-.14	-.04	.24	-.01	-.15
New Employer- Collaborator	.83	.19	.13	4.49 **	.83	.19	.13	4.48 **	.80	.19	.13	4.11 **	.79	.19	.12	4.10 **
New Employer- Competitor	.28	.36	.02	.78	.29	.36	.02	.80	-.41	.37	-.03	-1.09	-.40	.37	-.03	-1.07
Female	-.56	.19	-.09	-2.97 **	-.55	.19	-.08	-2.87 **	-.67	.20	-.10	-3.43 **	-.65	.20	-.10	-3.30 **
Career Motivation	.95	.10	.33	9.55 **	.95	.10	.33	9.48 **	.70	.10	.24	6.76 **	.69	.10	.24	6.69 **
Social Motivation	.00	.12	.00	.01	-.01	.12	.00	-.07	.38	.12	.10	3.08 **	.36	.12	.10	2.98 **
Mission-Driven Motivation	.86	.12	.26	7.39 **	.85	.12	.26	7.24 **	.79	.12	.23	6.45 **	.77	.12	.23	6.29 **
Pragmatic Motivation	.07	.10	.02	.68	.07	.10	.02	.72	-.09	.10	-.03	-.91	-.09	.10	-.03	-.86
Alumni Program Involvement					.03	.03	.03	1.14					.04	.03	.04	1.31
R^2	.28				.28				.23				.23			
$F(df)$	32.96 (11,936)				30.33 (12,935)				24.91 (11,940)				22.99 (12,939)			
ΔR^2	.27				.27				.22				.22			

* $p < .05$, ** $p < .01$

Table 12c. Study 1 Exploratory Analysis: Relationships between Alumni Program Involvement and Additional Outcomes

	DV = Participate in Mentoring Program							
	Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.06	.01	-.13	-4.40 **	-.06	.01	-.13	-4.40 **
Tenure	.00	.01	.02	.49	.00	.01	.02	.46
Exit- New Job	-.02	.23	.00	-.08	-.02	.23	.00	-.07
Exit- Layoff	-.02	.24	.00	-.07	-.02	.24	.00	-.07
New Employer- Collaborator	.45	.19	.07	2.30 *	.45	.20	.07	2.29 *
New Employer- Competitor	.00	.38	.00	.00	.00	.38	.00	.01
Female	-.34	.20	-.05	-1.73	-.34	.20	-.05	-1.69
Career Motivation	.79	.10	.27	7.59 **	.79	.11	.27	7.55 **
Social Motivation	.27	.12	.07	2.18 *	.27	.12	.07	2.15 *
Mission-Driven Motivation	.69	.12	.21	5.59 **	.68	.12	.20	5.53 **
Pragmatic Motivation	-.02	.10	-.01	-.17	-.02	.10	-.01	-.15
Alumni Program Involvement					.01	.03	.01	.35
R^2	.21				.21			
$F(df)$	22.01 (11,940)				20.17 (12,939)			
ΔR^2	.20				.20			

* $p < .05$, ** $p < .01$

Similar to arguments made for alumni motivations and involvement with the alumni program, another reason these relationships may have failed may be due to alumni network-specific differences. If variations exist between alumni-network on the outcomes, these differences may mask significant relationships when the data is aggregated. To explore this possibility, I conducted t-tests to examine differences in outcomes based on alumni network. As seen in Table 13, Company B had significantly stronger outcomes for recommending the company's products and services ($M= 7.42, SD= 2.25$) compared to Company A ($M= 6.91, SD= 2.21, t(1,022)= -3.66, p<.001$). Company B also had significantly stronger outcomes for applying for rehire ($M= 4.73, SD= 3.56$) compared to Company A ($M= 3.82, SD= 2.89, t(1,019)= -4.45, p<.001$). In contrast, Company A had significantly stronger outcomes for developing B2B relationships for the company ($M= 7.42, SD= 2.25$) compared to Company B ($M= 6.91, SD= 2.21, t(1,022)= -3.66, p<.001$). Furthermore, Company A had significantly stronger outcomes for providing industry insights ($M= 4.73, SD= 3.56$) compared to Company B ($M= 3.82, SD= 2.89, t(1,019)= -4.45, p<.001$). Considering the prior findings that alumni networks varied in the types of alumni practices used, these results suggest there are more nuanced relationships between the type of alumni practices used and the types of contributions alumni provide than what is currently hypothesized.

Table 13. Study 1 Exploratory Analysis: Mean Differences in Outcomes Between Company A and Company B

	Recommend Products/ Services	Recommend as Place to Work	Apply for Rehire	Freelance or Contract work
Company A	6.91	7.22	3.82	5.51
Company B	7.42	7.03	4.73	5.89
Mean				
Difference	-0.51	0.18	-0.91	-0.38
p-value	0.00	0.23	0.00	0.07

	Develop B2B Relationships	Mentoring Programs	Provide Industry Insights
Company A	5.69	6.24	6.46
Company B	5.04	6.02	5.81
Mean			
Difference	0.65	0.22	0.66
p-value	0.00	0.21	0.00

While t-test analyses highlighted the differences between the alumni networks, the table also highlights similarities across the alumni networks. Across both alumni networks, the mean values for the ambassador items (i.e. recommending the company’s products and services and the company as a place to work) are considerably higher than the mean values for the employment and business development items. These findings are in line with prior arguments for using brand ambassadorship outcomes as they are unrestricted by alumni employment or supervisory status.

STUDY 1 DISCUSSION

In study 1, I found support for some of the proposed hypotheses using the combined data. First, in order to understand whether corporate alumni programs can provide value to their parent organizations, I examined whether overall utilization of alumni benefits is positively related to desirable returns to the organization in the form of intentions to

contribute post-employment citizenship behaviors. In support of Hypothesis 1, the use of alumni benefits was positively related to the likelihood of PEC from alumni.

To understand why alumni choose to participate in post-employment relationships, I explored the underlying motivations that drive involvement in corporate alumni programs. In line with Hypothesis 4 and 5, social and mission-driven motivations were positively related to overall utilization of alumni program benefits. Furthermore, supporting Hypothesis 6, the relationship between mission-driven motivations and utilization of alumni program involvement was significantly stronger than the relationships between career, pragmatic, and social motivations and utilization of the alumni program. In contrast to expectations, career and pragmatic motivations did not have a significant relationship with the overall utilization of the alumni program benefits.

In addition to the conducting analyses with SEM for the combined data, I also examined the data for the separate alumni network samples. While the results showed consistent support of Hypothesis 1, increased use of the alumni program increases PEC, the impact of motivations on overall use varied. This seems to suggest between-alumni network differences in alumni motivations as a result of the alumni in the different networks. Indeed, exploratory analyses indicate there are a variety of significant differences in motivations and involvement with alumni practices that divide the two alumni networks.

Exploratory analyses examining the relationships between motivation and individual benefit use lend insight into more nuanced relationships. These analyses suggest that social and mission-driven motivations may drive wider use of benefits while career and pragmatic motivations may instigate higher frequency of use of particular benefits.

The findings from Study 1 provide a critical foundation for understanding why alumni participate in post-employment relationships and how post-employment relationships provide value to organizations. However, there are several limitations to Study 1. To start, utilization of benefits was measured with a dichotomous scale, either the alum used the benefit or did not use the benefit. However, the extent to which an alum uses or relies on a benefit provided by an alumni program is likely be important. Furthermore, I was unable to rule out the possibility that experiences during employment, rather than alumni motivations, is the driver of an alum's decision to utilize alumni program benefits. Thus, I address these limitations in a second study.

In addition to addressing these limitations, the results from Study 1 also uncovered new avenues for research on post-employment relationships. First, counter to expectations, neither career motivations nor pragmatic motivations was significantly associated with overall use of alumni benefits. This was particularly surprising given alumni managers often contend career motivations are the dominant reason former employees participate in their alumni programs. It may be that the measurement of involvement in alumni programs as a count of total benefit utilization masked more nuanced relationships between motivations and alumni program involvement. Second, the varying effect of motivations on use highlights the importance of understanding how motivations may differ amongst alumni. Given that motivations have varying effects on utilization of alumni benefits, it is important to understand how alumni characteristics may be differentially associated with motivations. In the following sections, I argue that alumni motivations are differentially associated with specific alumni benefits. I also argue that alumni demographics influence the strength of alumni motivations. Finally, I present a second study that tests these additional hypotheses.

STUDY 2

Aligning Individual Alumni Program Benefits with Predisposed Motivations

In an effort to understand what causes individuals to voluntarily contribute their resources to organizations, Knoke and Wright-Isak (1982) proposed the “predisposition-opportunity” model. The model contends that voluntary action from individuals can be explained by an alignment of individual predispositions and the opportunities provided by an organization. Predispositions are characterized as motivations that cause an individual to act when conditions are favorable to achieving desired end goals (Knoke & Wright-Isak, 1982). The authors offer three general motives that jointly impact individual decisions about involvement in voluntary associations: rational choice, affective bonding, and normative conformity. As mentioned in Study 1, these three categories aided in providing the foundation for the four alumni motivations such that career and pragmatic motivations are extensions of rational choice, social motivation is an extension of affective bonding, and mission-driven motivation is an adaptation of normative conformity. Knoke and Wright-Isak (1982) argue that in order to entice members to contribute their resources, organizations must offer inducements that align with individuals’ predisposed motives. Organizations can thus offer (a) utilitarian incentives, or private goods that can be individually consumed, (b) social incentives, or jointly coordinated social or recreational activities, or (c) normative incentives, or public goods that require collective efforts.

The predisposition-opportunity framework is not unique in proposing the strength of alignment between individual motivations and organizational incentives. Similar arguments for the alignment of motives and incentives have been previously offered in organizational research. For example, Ajzen and Fishbein (1970) proposed a principle of compatibility in

their research on attitude-behavior relationships such that consistency is critical in creating strong linkages. In other words, higher compatibility in the chain between beliefs, attitudes, intentions, and behaviors should result in stronger statistical relationships between them (Ajzen, 1996; Sutton, 1998). Furthermore, Vroom's (1964) expectancy theory argues that individuals act in their own self-interest, and will, therefore, pursue courses of action based on expectations they will maximize self-interest and utility. Organizational scholars have frequently drawn upon this theory to argue the alignment of structural incentives with individual motives in order to achieve desired performance outcomes (Fox, Scott, & Donohue, 1993; Jenkins Jr., Mitra, Gupta, & Shaw, 1998; Shah, Higgins, & Friedman, 1998).

These arguments provide the foundation for the expected relationships between alumni motivations and involvement with specific alumni benefits. While the results of Study 1 did not support a relationship between career and pragmatic motivations and overall use of alumni benefits, post-hoc exploratory analyses suggested these motivations prompted greater use of specific benefits that were more closely aligned with the motivation. Specifically, career motivations encompass an individual's desire to enhance their professional opportunities. Thus, it is likely that career motivations will be positively associated with alumni benefits that explicitly provide career opportunities, such as the job board. Similarly, pragmatic motivations are an expression of individuals' desires to save resources such as time, money, or effort. It logically follows that pragmatic motivations should be positively related to alumni benefits that offer convenience and opportunities to save money, such as alumni benefits/perks. Finally, while social motivations were positively associated with overall alumni program utilization, benefits that directly enable opportunities to connect with others seem to be highly congruent with these motivations. Thus, it may be that individuals

with stronger social motivations will have greater utilization of benefits such as in-person events, social networking sites, and messaging.

Hypothesis 7: Career motivations are positively associated with job board utilization.

Hypothesis 8: Pragmatic motivations are positively associated with the benefits page.

Hypothesis 9: Social motivations are positively associated with in-person events, social networking sites, and messaging.

While career, pragmatic and social motivations may also be positively related to other individual alumni benefits, prior theory and research does not provide a foundation for a priori hypotheses. Thus, I will examine additional associations with these motivations in exploratory analyses.

Demographics and Alumni Motivations

Theory and prior research have indicated motivations are likely to vary systematically amongst alumni members based on certain observable characteristics (i.e. age, race, and sex). For example, in the context of volunteering, studies examining volunteering through work have demonstrated a positive relationship between age and participation in volunteer events (Cornwell & Warburton, 2014; DeVoe & Pfeffer, 2007; Peterson, 2004; Rodell, 2013). Furthermore, prior research has produced evidence of differences in motivation to volunteer based on sex (Cornwell & Warburton, 2014; DeVoe & Pfeffer, 2007; Rodell, Schröder, & Keating, 2016) and race (Latting, 1990). In the following sections, I explore the theoretical reasons why age, sex, and race are likely to influence the strength of the four alumni motivations.

Age. Research on life-span development has revealed that age plays a critical role in determining an individual's goals and motivations (Fleeson & Heckhausen, 1997; Inceoglu, Segers, & Bartram, 2011). According to socioemotional selectivity theory (Carstensen, 1995; Carstensen et al., 1999), all humans have a fundamental awareness of the passage of time, and relatedly, awareness of the limitations placed on lifetime as time passes. It is this awareness of time passage and the finite time in life that plays a fundamental role in motivation. This is because the selection and prioritization of goals over the course of a lifetime are influenced by the individual's perceptions of time constraints (Carstensen et al., 2003). Thus, when time is perceived to be open-ended, a more frequent occurrence in youth, expansive and wide-ranging goals are prioritized. These goals are generally knowledge-related, instrumental, and/or focused on gaining resources. In contrast, as people age, they tend to perceive time to be more limited or constrained, and thus adjust goals to be more emotionally meaningful (Carstensen et al., 2003).

When applied in research, scholars have argued that age-related declines in instrumental goals will be indicative of a decline in work-related motivations. Supporting this argument, researchers have found that age is negatively related with the motivation to continue to work (Kooij, Lange, Jansen, & Dikkers, 2008), work-related growth motives (Kooij, De Lange, Jansen, Kanfer, & Dikkers, 2011) and interest in participating in continuing education initiatives (Warr & Fay, 2010). In contrast, the increased emphasis on emotionally meaningful goals have led scholars to argue that aging will be related to increasing social motivations and desire to support one's self concept. Indeed, scholars have produced evidence of a link between aging and interest in social connections (Lang & Carstensen, 2002; Okun, Barr, & Herzog, 1998; Okun & Schultz, 2003) as well as with generative motives that support

self-concept such as teaching and mentoring (Lang & Carstensen, 2002). Finally, scholars have argued that the utility received from effort declines as one gets older and thus, conservation of effort and resources becomes more important with age (Kanfer & Ackerman, 1989).

In line with these arguments and findings, I contend that as alumni age, their motivation to engage in post-employment relationship through corporate alumni programs will decline as their goals shift away from career-advancement. As this shift in goals moves from a focus on career-advancement to a focus on enhancing relationships and positive self-concepts with age, I argue that age will be positively related to motivations to participate alumni programs for social and mission-driven purposes. Finally, as the conservation of effort increases with age, I argue that age will also be positively related to pragmatic motivations for participate in alumni networks.

Hypothesis 10: Age will be negatively related with career motivations.

Hypothesis 11: Age will be positively related with (a) social, (b) mission-driven, and (b) pragmatic motivations.

Sex and Race. Researchers have dedicated considerable attention to explaining the differences in returns for women and racial minorities compared to white men in the labor market. One explanation for these differences that has received substantial support is gender and race inequalities are reproduced through the segregation of social networks and informal isolation (Ibarra, 1992, 1993; Kanter, 1977; McPherson & Smith-Lovin, 1987; Nkomo & Cox, 1990; Reskin & Bielby, 2005). Barriers to social or informal networks can create critical disadvantages as these networks not only support job effectiveness and career advancement

but also provide benefits through friendship and social support (Gibbons & Olk, 2003; Ibarra, 1993; Olk & Gibbons, 2010). Thus, the impact of homophily- or preferences for interaction with others who are similar based on attributes such as sex or race- may disadvantage women and minorities, who are often lower in status and less common in organizations, as they face barriers to accessing higher-status career and social opportunities (Ibarra, 1992, 1993, 1995; Kanter, 1977; McPherson & Smith-Lovin, 1987; Rogers & Kincaid, 1981). Indeed, research has found the networks for women and minorities suffer from various weaknesses such as smaller network size (Knouse, 1991; Mehra, Kilduff, & Brass, 1998), less dense networks (Friedman, Kane, & Cornfield, 1998), and weaker ties (Ibarra, 1993). The effects of homophily have been found to reproduce inequality in a variety of professional aspects at work such as promotion possibilities (Brass, 1984; Ibarra, 1997; Ibarra, Carter, & Silva, 2010; Kanter, 1977), salary negotiations (Seidel, Polzer, & Stewart, 2000), and hiring processes (Fernandez & Fernandez-Mateo, 2006; Fernandez & Sosa, 2005; Kmec, 2007; McDonald, Lin, & Ao, 2009; Petersen, Saporta, & Seidel, 2000).

Given the barriers to social networks within organizations for women and minorities that may limit professional and social opportunities, it may be that women and minorities have greater interest in alternative avenues to professional networks such as corporate alumni programs. For example, it may be that a white male alum is satisfied with the access to informal social networks in their current employment context. In contrast, a female or minority alum may recognize the limitations of accessing informal social networks in their current employment context and have stronger motivations to utilize alternative paths to either find similar others or expand their networks more generally. As such, I argue that compared

male and Caucasian alumni, female and minority alumni will have stronger career and social motivations.

Hypothesis 12: Compared to white male alumni, (a) female and (b) minority alumni will have stronger career motivations.

Hypothesis 13: Compared to white male alumni, (a) female and (b) minority alumni will have stronger social motivations.

While it may be that female and minority alumni characteristics are differentially associated with mission-driven and pragmatic motivations as well, lack of theoretical or empirical support prevent a priori hypothesizing. Thus, I will examine these relationships with exploratory analyses.

STUDY 2 METHODS

Study 2 Data

In Study 2, I partnered with another organization that offers alumni programs, hereafter called Company C. This client is a multinational software corporation that operates in 180 countries. There are approximately 97,000 employees currently in the organization and approximately 5,000 alumni registered at the time of the survey. In collaboration with the Company C alumni manager, we sent an email to the alumni base that contained a non-traceable link to the survey.

In total, I collected data from 528 alumni in Company C. Alumni respondents were predominantly male (79%) and Caucasian (63%). The remaining respondents identified as Asian/Pacific Islander (19%), Multiple Races (4%), Hispanic/Latino (2%), and Black/African American (1%). Respondents left the company for a variety of reasons such as voluntarily

leaving for a new job (43%), starting a new business (11%), restructuring or layoffs (7%), retirement (9%), or non-work reasons (i.e. family reasons or to go back to school; 8%). Only 4% of the alumni respondents had been terminated for cause. Alumni respondents left their former firms at a variety of levels including non-supervisors (41%), team leaders (21%), supervisors (5%), managers (8%), directors (14%), and executives (6%). Furthermore, while 50% of alumni respondents reported no direct working relationship with their former employer, 15% of the respondents were employed in client organizations, 2% were in supplier organizations, 29% were in distributor organizations, and 4% were employed by competitors. On average, alumni respondents had been out of the focal organizations for about 5.5 years and were employed at their former employer for about 8.4 years.

Study 2 Measures

Alumni Motivation. Alumni Motivations were measured the same as in Study 1 (1= Strongly disagree to 5= Strongly agree). I again calculated the three reliability measures using JASP 0.9.2.0 (<https://jasp-stats.org/>). The reliability for career motivation is $\alpha = .81$, $\omega = .82$, $GLB = .85$; social motivation is $\alpha = .80$, $\omega = .82$, $GLB = .84$, mission-driven motivation is $\alpha = .83$, $\omega = .83$, $GLB = .85$, for pragmatic motivation is $\alpha = .77$, $\omega = .78$, $GLB = .81$.

Alumni Program Involvement. In order to examine the more nuanced relationships with alumni program involvement, the measurement for utilization of alumni programs was adapted for Study 2. Furthermore, Alumni Program C offered 10 as opposed to 12 different alumni offerings. Therefore, participants were asked “How often do you use the following benefit/functionality?” about 10 different alumni offerings. They were then presented with a 6-point Likert scale: 0 = “I am not aware of it”, 1= “I am aware but never use it”, 2= “Rarely”, 3= “Occasionally”, 4= “Frequently”, and 5= “Very Frequently”.

Alumni Demographics. To examine the relationship between observable characteristics and alumni motivations, I collected data on alumni sex, race, and age. Sex was coded as 1=Female, 0= Male/Binary. Race measured as 1= Minority (i.e. Black, Latinx, Asian, and multiple race), 0= White. Age was measured categorically. Respondents represented a variety of ages with 14% between the ages of 18-30, 17% between the ages of 31-40, 25% between the ages of 41-50, 21% between the ages of 51-60, 14% between the ages of 61-70, and 2% were 71 years of age or older.

Controls. In line with Study 1, I controlled for time since departure, tenure at the organization, exit status in terms of leaving either for a new job or due to layoffs, and current employment status at either a collaborator organization (i.e. client, partner, supplier or distributor) or a competitor organization. In addition to the controls included in Study 1, this data collection provided the opportunity to ask alumni about their satisfaction with the employment experiences while working at their former company. Respondents were asked, “When you think about your overall experiences while employed at (company), how satisfied were you with your experience while working at SAP?” Respondents were then presented with a 5-point Likert scale (1= Very dissatisfied, 5= Very satisfied).

STUDY 2 RESULTS

The means, standard deviations, and correlations among study variables are presented in Table 14.

Table 14. Study 2 Means, Standard Deviations, and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Alumni Portal Use	2.11	1.12	-										
2 Member Directory Use	1.69	1.15	0.76 **										
3 News Page Use	1.94	1.26	0.79 **	0.72 **									
4 Messaging Use	1.43	1.18	0.59 **	0.64 **	0.68 **								
5 Job Board Use	1.60	1.35	0.66 **	0.60 **	0.62 **	0.54 **							
6 Benefits/Perks Use	0.99	1.37	0.44 **	0.49 **	0.49 **	0.44 **	0.43 **						
7 Social Networking Alumni Site Use	0.77	1.06	0.40 **	0.43 **	0.45 **	0.45 **	0.43 **	0.54 **					
8 Alumni Newsletter Use	2.47	1.41	0.47 **	0.44 **	0.55 **	0.45 **	0.35 **	0.36 **	0.27 **				
9 Direct Alumni Emails Use	2.01	1.56	0.35 **	0.34 **	0.38 **	0.40 **	0.29 **	0.34 **	0.33 **	0.55 **			
10 In-Person Events Use	1.78	1.53	0.44 **	0.47 **	0.47 **	0.42 **	0.32 **	0.49 **	0.34 **	0.53 **	0.58 **		
11 Career Motivation	3.97	0.86	0.12 **	0.10 *	0.10 *	0.08	0.25 **	0.01	0.11 *	0.06	0.04	-0.02	
12 Social Motivation	4.00	0.74	0.16 **	0.18 **	0.24 **	0.18 **	0.12 **	0.14 **	0.13 **	0.28 **	0.21 **	0.24 **	0.25 **
13 Mission-Driven Motivation	3.68	0.78	0.20 **	0.14 **	0.20 **	0.16 **	0.17 **	0.12 **	0.18 **	0.27 **	0.21 **	0.14 **	0.38 **
14 Pragmatic Motivation	3.32	0.84	0.14 **	0.12 **	0.18 **	0.14 **	0.14 **	0.20 **	0.18 **	0.12 **	0.14 **	0.06	0.40 **
15 Age	5.66	2.68	-0.01	0.04	0.08	0.06	-0.16 **	0.14 **	-0.10 *	0.17 **	0.12 **	0.22 **	-0.41 **
16 Female	0.16	0.37	-0.04	-0.06	-0.03	-0.08	-0.03	-0.04	-0.04	-0.02	0.06	0.02	0.11 *
17 Minority Status	0.25	0.43	-0.04	-0.07	-0.04	0.04	0.02	-0.06	0.14 **	-0.11 *	0.04	-0.13 **	0.18 **
18 Exit- New Job	0.43	0.50	-0.03	0.01	0.02	0.05	0.04	0.04	0.00	0.06	0.05	0.03	0.09 *
19 Exit- Layoff	0.07	0.26	-0.05	-0.02	-0.04	0.00	0.00	0.03	0.04	-0.04	0.02	-0.05	0.04
20 Time Since Departure	5.54	5.25	-0.03	0.04	0.03	0.00	-0.08	0.01	-0.05	0.10 *	0.09	0.15 **	-0.03
21 Tenure at Former Employer	8.39	6.15	0.09	0.10 *	0.12 **	0.08	-0.09 *	0.16 **	-0.07	0.21 **	0.13 **	0.30 **	-0.38 **
22 Current Employer- Collaborator	0.46	0.50	0.10 *	0.09 *	0.14 **	0.10 *	0.11 *	0.09	0.10 *	0.13 **	0.10 *	0.12 **	0.17 **
23 Current Employer- Competitor	0.04	0.20	0.01	0.07	0.03	0.01	0.00	-0.01	-0.01	-0.02	0.02	-0.03	0.03

	12	13	14	15	16	17	18	19	20	21	22
13 Mission-Driven Motivation	0.50 **										
14 Pragmatic Motivation	0.40 **	0.46 **									
15 Age	0.13 **	-0.01	-0.08								
16 Female	0.11 *	0.03	0.01	-0.11 *							
17 Minority Status	0.04	0.13 **	0.11 *	-0.37 **	0.04						
18 Exit- New Job	0.06	-0.04	-0.01	-0.01	-0.07	-0.07					
19 Exit- Layoff	0.00	-0.07	0.00	0.03	0.08	0.04	-0.24 **				
20 Time Since Departure	0.13 **	-0.01	-0.06	0.39 **	-0.02	-0.20 **	0.06	0.01			
21 Tenure at Former Employer	0.12 **	-0.04	-0.06	0.69 **	-0.03	-0.29 **	-0.02	-0.01	0.08		
22 Current Employer- Collaborator	0.10 *	0.09 *	0.13 **	-0.10 *	-0.03	-0.04	0.20 **	0.03	0.17 **	-0.08	
23 Current Employer- Competitor	0.05	-0.08	-0.03	-0.07	0.01	-0.03	0.09 *	0.02	-0.03	-0.04	-0.19 **

Notes: Career, Social, Mission-Driven, and Pragmatic Motivations were measured on a 5-point Likert scale. Use for all benefits was measured on a 6-point Likert scale. Female, Exit- New Job, Exit- Layoff, Current Employment- Partner, and Current Employment-Competitor are dummy coded. Alumni Program Involvement was measured as a percent of benefits out of 12 total offerings. Post-Employment Citizenship was measured with an 11-point scale (0= Not at all likely, 10 = Extremely likely). Time Since Departure and Tenure were measured in years.
*p<.05, ** p<.01

Study 2 Measurement Invariance Tests

To examine the equivalence between Company A and Company C as well as between Company B and Company C, I again conducted measurement invariance analyses to examine equivalence of the statistical properties of the alumni motivations and the PEC constructs. I started by examining the configural invariance of the constructs between Company A and Company C. As displayed in Table 15, the test provided exhibited poor fit of the data (SRMR= 2.78, RMSEA= 0.16, CFI= 0.61, TLI= 0.48). As expected, subsequent tests continued to exhibit poor fit as seen in Table 16.

I also ran measurement invariance tests to examine the equivalence of the statistical properties of the alumni motivation and PEC constructs for Company B and Company C. As displayed in Table 17 and similar to the prior measurement invariance tests, the results of the comparison between Company B and Company C exhibited poor fit of the data (SRMR= 3.33, RMSEA= 0.16, CFI= 0.65, TLI = 0.54). Again, the following tests continued to exhibit poor fit as seen in Table 18.

The poor results of the three measurement invariance tests have critical implications for the outcomes of this research. The failure of the data to fit the configural invariance model suggests that there are fundamental differences in the dimensionality of the assesses constructs across the alumni network groups. It raises questions as to whether comparisons of the relationships with motivations and PECs are justifiable.

Table 15. Motivations and PEC Measurement Invariance Test Comparing Company A and Company C

Model	df	Log-Likelihood	# params	Scale	SRMR	RMSEA	CFI	TLI
1. Configural Invariance	139	-18732.649	99	1.32	2.78	0.16	0.61	0.48
2. Metric Invariance	148	-19227.540	90	1.29	2.99	0.18	0.44	0.31
3. Scaler Invariance	157	-19630.535	81	1.29	3.61	0.20	0.30	0.18
4. Invariant Uniqueness	171	-19669.597	67	1.23	3.60	0.19	0.30	0.25
5. Invariant Factor Variances	176	-19733.208	62	1.27	3.49	0.19	0.27	0.24
6. Invariant Factor Covariances	186	-19763.020	52	1.25	3.51	0.19	0.26	0.28
7. Invariant Factor Means	186	-19763.020	52	1.25	3.51	0.19	0.26	0.28

Notes: Measurement Invariance analyses is examining the equivalence between Company A and Company C of the alumni motivations and the PEC constructs. Co A # of observations = 480. Co C # of observations =525. Total # of observations = 1,005.

Table 16. Comparison of Fuller versus Restricted Models for Company A and Company C

Model Comparison	Fuller Model			Restricted Model			Rescaled -2ΔLL
	Log-Likelihood	#p's	Scale	Log-Likelihood	#p's	Scale	
1. Configural Invariance vs. Metric Invariance	-18732.649	99	1.318	-19227.540	90	1.286	606.30
2. Metric Invariance vs. Scaler Invariance	-19227.540	90	1.286	-19630.535	81	1.289	640.64
3. Scaler Invariance vs. Invariant Uniqueness	-19630.535	81	1.289	-19669.597	67	1.228	49.44
4. Invariant Uniqueness vs. Invariant Factor Variances	-19669.597	67	1.228	-19733.208	62	1.273	188.06
5. Invariant Factor Variances vs. Invariant Factor Covariances	-19733.208	62	1.273	-19763.020	52	1.251	43.01
6. Invariant Factor Covariances vs. Invariant Factor Means	-19763.020	52	1.251	-19763.020	52	1.251	0.00

Notes: Measurement Invariance analyses is examining the equivalence between Company A and Company C of the alumni motivations and the PEC constructs. Co A # of observations = 480. Co C # of observations = 525. Total # of observations = 1,005

Table 17. Motivations and PEC Measurement Invariance Test Comparing Company B and Company C

Model	df	Log-Likelihood	# params	Scale	SRMR	RMSEA	CFI	TLI
1. Configural Invariance	139	-19402.973	99	1.45	3.33	0.16	0.65	0.54
2. Metric Invariance	148	-19877.975	90	1.43	3.59	0.18	0.52	0.41
3. Scaler Invariance	157	-20514.656	81	1.46	3.86	0.20	0.33	0.22
4. Invariant Uniqueness	171	-20400.213	67	1.34	4.05	0.18	0.39	0.35
5. Invariant Factor Variances	176	-20673.941	62	1.42	3.69	0.20	0.30	0.28
6. Invariant Factor Covariances	186	-20743.042	52	1.39	3.84	0.19	0.29	0.31
7. Invariant Factor Means	186	-20743.042	52	1.39	3.84	0.19	0.29	0.31

Notes: Measurement Invariance analyses is examining the equivalence between Company B and Company C of the alumni motivations and the PEC constructs. Co B # of observations = 551. Co C # of observations =525. Total # of observations = 1,076.

Table 18. Comparison of Fuller versus Restricted Models for Company B and Company C

Model Comparison	Fuller Model			Restricted Model			Rescaled -2ΔLL
	Log- Likelihood	#p's	Scale	Log- Likelihood	#p's	Scale	
1. Configural Invariance vs. Metric Invariance	-19402.973	99	1.45	-19877.975	90	1.43	566.09
2. Metric Invariance vs. Scaler Invariance	-19877.975	90	1.43	-20514.656	81	1.46	1135.51
3. Scaler Invariance vs. Invariant Uniqueness	-20514.656	81	1.46	-20400.213	67	1.34	-111.70
4. Invariant Uniqueness vs. Invariant Factor Variances	-20400.213	67	1.34	-20673.941	62	1.42	1602.44
5. Invariant Factor Variances vs. Invariant Factor Covariances	-20673.941	62	1.42	-20743.042	52	1.39	88.33
6. Invariant Factor Covariances vs. Invariant Factor Means	-20743.042	52	1.39	-20743.042	52	1.39	0.00

Notes: Measurement Invariance analyses is examining the equivalence between Company B and Company C of the alumni motivations and the PEC constructs. Co B # of observations = 551. Co C # of observations = 525. Total # of observations = 1,076.

Study 2 Hypotheses Testing

I started testing hypotheses by examining the effects of age, sex, and race on alumni motivations, Hypotheses 10-12. Specifically, Hypothesis 10 proposed age is negatively related to career motivations while Hypothesis 11 contended age is positively related to social, mission-driven, and pragmatic motivations. To test these hypotheses, I used hierarchical (ordinary least squares (OLS) regression analyses. As is customary, I entered controls before examining main effects. As seen in Step 2 of Table 19 and in support of Hypothesis 10, results suggest there is a significant negative relationship between age and career motivations ($b = -.10$, $s.e. = .02$, $\beta = -.31$, $p < .01$). However, contradicting expectations, Hypothesis 11a, b, and c were not supported, and thus, these results indicate age does not influence social, mission-driven, or pragmatic motivations.

In addition to examining the effects of age on motivations, I also proposed that an alum's sex and race would be influential on motivations to participate in alumni programs. Specifically, Hypothesis 12 predicted female and minority alumni would have stronger career motivations compare to male and white alumni while Hypothesis 13 proposed that female and minority alumni would have stronger social motivations compared to male and white alumni. Supporting Hypothesis 12a, female alumni had significantly stronger career motivations ($b = .21$, $s.e. = .10$, $\beta = .09$, $p < .05$). However, Hypothesis 12b did not receive support which suggests minority alumni do not have stronger career motivations. Regarding social motivations, results suggested these motivations were stronger for both female ($b = .22$, $s.e. = .09$, $\beta = .11$, $p < .05$) and minority alumni ($b = .22$, $s.e. = .08$, $\beta = .13$, $p < .01$), and thus Hypothesis 13 received full support. In addition to the proposed hypotheses, I examined the influence of sex and race on mission-driven and pragmatic motivations as well. Minority status was

positively associated with mission-driven ($b = .26$, $s.e. = .09$, $\beta = .15$, $p < .01$) and pragmatic motivations ($b = .23$, $s.e. = .10$, $\beta = .12$, $p < .05$), but female identification did not produce a significant relationship with either mission-driven or pragmatic motivations.

Table 19. Relationships between Demographics and Alumni Motivations

	DV = Career Motivation								DV = Social Motivation							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.01	.01	-.04	-.86	.01	.01	.09	1.78	.01	.01	.09	1.94	.01	.01	.07	1.27
Tenure	-.05	.01	-.38	-8.93 **	-.02	.01	-.17	-2.75 **	.01	.01	.08	1.80	.00	.01	.04	.52
Exit- New Job	.14	.08	.08	1.76	.16	.08	.09	2.16 *	.00	.07	.00	.03	.02	.07	.01	.30
Exit- Layoff	.20	.15	.06	1.38	.23	.14	.07	1.58	-.04	.13	-.02	-.32	-.08	.13	-.03	-.59
New Employer- Collaborator	.31	.08	.18	3.97 **	.25	.08	.15	3.28 **	.12	.07	.08	1.73	.15	.07	.11	2.22 *
New Employer- Competitor	.19	.18	.05	1.08	.13	.17	.03	.74	.25	.16	.07	1.57	.29	.16	.09	1.88
	.05	.04	.06	1.32	.03	.04	.04	.87	.09	.03	.13	2.64 **	.09	.03	.13	2.71 **
Age					-.10	.02	-.31	-4.56 **					.04	.02	.14	1.81
Female					.21	.10	.09	2.13 *					.22	.09	.11	2.46 *
Minority					.09	.09	.04	.97					.22	.08	.13	2.69 **
R^2	.20				.25				.05				.08			
$F(df)$	16.19 (7, 456)				15.30 (10, 463)				3.46 (7, 457)				3.89 (10, 454)			
ΔR^2	.19				.24				.04				.06			

	DV = Mission-Driven Motivation								DV = Pragmatic Motivation							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.01	.01	-.06	-1.25	-.01	.01	-.09	-1.55	-.02	.01	-.10	-2.08 *	-.01	.01	-.08	-1.52
Tenure	-.01	.01	-.06	-1.35	-.01	.01	-.11	-1.63	-.01	.01	-.06	-1.32	-.01	.01	-.04	-.51
Exit- New Job	-.13	.08	-.09	-1.74	-.12	.08	-.08	-1.61	-.03	.08	-.02	-.36	-.02	.08	-.01	-.25
Exit- Layoff	-.32	.15	-.10	-2.15 *	-.35	.15	-.11	-2.36 *	.00	.16	.00	-.01	-.01	.16	.00	-.09
New Employer- Collaborator	.17	.08	.11	2.17 *	.20	.08	.13	2.60 *	.23	.08	.14	2.80 **	.24	.08	.15	2.92 **
New Employer- Competitor	-.20	.17	-.05	-1.13	-.14	.17	-.04	-.81	-.01	.19	.00	-.03	.02	.19	.01	.13
Employment Satisfaction	.10	.04	.12	2.56 *	.10	.04	.13	2.73 **	.10	.04	.12	2.43 *	.10	.04	.12	2.45 *
Age					.04	.02	.13	1.77					.00	.02	.01	.11
Female					.05	.10	.03	.53					.02	.11	.01	.17
Minority					.26	.09	.15	2.92 **					.23	.10	.12	2.37 *
R^2	.05				.07				.04				.05			
$F(df)$	3.12 (7, 455)				3.22 (10, 452)				2.44 (7, 445)				2.29 (10, 442)			
ΔR^2	.03				.05				.02				.03			

* $p < .05$, ** $p < .01$

Drawing on the predisposition-opportunity model (Knoke & Wright Isak, 2004), I argued that the motivation-alumni benefit utilization relationship would be stronger when the benefits were congruent with the originating motivation. Specifically, I predicted career motivations would be positively associated with job board utilization (H7), pragmatic motivations would be positively associated with utilization of alumni benefits/perks (H8), and social motivations should be positively associated with use of in-person events (H9a), social networking sites (H9b), and messaging (H9c). I again used hierarchical OLS regression to examine these effects while controlling for demographics as well as the specified controls.

Supporting Hypothesis 7, career motivations were significantly associated with use of the job board ($b = .26$, $s.e. = .09$, $\beta = .17$, $p < .01$) while notably none of the other 3 motivations appeared to significantly influence job board utilization. Similarly, while none of the other 3 motivations achieved a significant relationship, pragmatic motivations were positively and significantly related to use of the benefits/perks page ($b = .30$, $s.e. = .09$, $\beta = .18$, $p < .01$) supporting Hypothesis 8. Finally, social motivations were positively and significantly related to in-person events use ($b = .32$, $s.e. = .11$, $\beta = .15$, $p < .01$) and messaging use ($b = .20$, $s.e. = .09$, $\beta = .12$, $p < .05$), but they were not related to use of social networking sites. Thus, H9a and H9c received support but H9b did not.

Table 20a. Relationships between Alumni Motivations and (a) Job Board Use and (b) Benefits/Perks Use

	DV = Job Board Use								DV = Benefits/Perks Use							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.01	.01	-.04	-.76	-.01	.01	-.05	-.96	-.02	.02	-.07	-1.16	-.01	.02	-.05	-.84
Tenure	.01	.02	.02	.35	.01	.02	.05	.78	.03	.02	.11	1.59	.02	.02	.11	1.58
Exit- New Job	-.02	.13	-.01	-.12	-.05	.13	-.02	-.34	.02	.14	.01	.16	.04	.14	.02	.30
Exit- Layoff	.06	.26	.01	.24	.04	.26	.01	.16	.27	.26	.05	1.03	.31	.26	.06	1.18
New Employer- Collaborator	.22	.14	.08	1.62	.11	.14	.04	.84	.32	.14	.12	2.30 *	.25	.14	.09	1.79
New Employer- Competitor	.02	.31	.00	.07	-.03	.30	-.01	-.11	.19	.31	.03	.60	.17	.31	.03	.54
Employment Satisfaction	.04	.07	.03	.61	.01	.07	.01	.12	.05	.07	.03	.69	.01	.07	.01	.12
Age	-.09	.04	-.18	-2.30 *	-.07	.04	-.14	-1.77	.05	.04	.10	1.35	.04	.04	.07	.94
Female	-.14	.17	-.04	-.79	-.21	.17	-.06	-1.22	-.12	.18	-.03	-.66	-.12	.18	-.03	-.67
Minority	-.07	.16	-.02	-.46	-.15	.16	-.05	-.94	.05	.16	.02	.31	-.04	.16	-.01	-.26
Career Motivation					.26	.09	.17	2.80 **					-.09	.10	-.06	-.94
Social Motivation					.10	.10	.05	.98					.09	.11	.04	.79
Mission-Driven Motivation					.08	.10	.05	.82					.04	.10	.02	.39
Pragmatic Motivation					.03	.09	.02	.38					.30	.09	.18	3.23 **
R^2	.04				.08				.05				.08			
$F(df)$	1.75 (10, 440)				2.73 (14, 436)				2.17 (10, 438)				2.76 (14, 434)			
ΔR^2	.02				.05				.03				.05			

* $p < .05$, ** $p < .01$

Table 20b. Relationships between Alumni Motivations and (a) In-Person Events Use and (b) Social Networking Alumni Sites Use

	DV = In-Person Events Use								DV = Social Networking Alumni Sites Use							
	Step 1				Step 2				Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	.04	.02	.13	2.38 *	.04	.02	.12	2.27 *	-.01	.01	-.03	-.47	.00	.01	-.01	-.23
Tenure	.08	.02	.33	5.04 **	.08	.02	.33	5.08 **	.00	.01	.01	.07	.00	.01	.01	.12
Exit- New Job	-.06	.15	-.02	-.38	-.03	.15	-.01	-.24	-.02	.11	-.01	-.22	.00	.11	.00	-.01
Exit- Layoff	-.21	.28	-.04	-.76	-.12	.28	-.02	-.44	.23	.21	.05	1.10	.29	.21	.07	1.40
New Employer- Collaborator	.36	.15	.12	2.44 *	.29	.15	.10	1.96	.23	.11	.10	2.05 *	.16	.11	.08	1.47
New Employer- Competitor	.11	.33	.02	.32	.03	.33	.00	.10	.07	.25	.01	.29	.06	.24	.01	.25
Employment Satisfaction	.06	.07	.04	.76	.02	.07	.01	.21	.01	.05	.01	.17	-.02	.06	-.02	-.42
Age	-.03	.04	-.05	-.65	-.05	.04	-.08	-1.11	-.01	.03	-.03	-.35	-.02	.03	-.06	-.73
Female	.16	.19	.04	.86	.10	.19	.02	.53	-.12	.14	-.04	-.87	-.13	.14	-.05	-.96
Minority	-.09	.17	-.03	-.51	-.19	.17	-.05	-1.09	.36	.13	.14	2.82 **	.28	.13	.11	2.20 *
Career Motivation					-.02	.10	-.01	-.20					-.05	.08	-.04	-.63
Social Motivation					.32	.11	.15	2.78 **					.08	.09	.06	.98
Mission-Driven Motivation					.18	.11	.09	1.66					.12	.08	.09	1.53
Pragmatic Motivation					-.09	.10	-.05	-.89					.13	.07	.10	1.74
R^2	.14				.17				.04				.07			
$F(df)$	6.90 (10, 437)				6.31 (14, 433)				1.80 (10, 438)				2.27 (14, 434)			
ΔR^2	.12				.14				.02				.04			

* $p < .05$, ** $p < .01$

Table 20c. Relationships between Alumni Motivations and Messaging Use

	DV = Messaging Use							
	Step 1				Step 2			
	b	s.e.	β	t	b	s.e.	β	t
Time Since Departure	-.01	.01	-.04	-.79	-.01	.01	-.05	-.81
Tenure	.02	.01	.08	1.22	.02	.01	.09	1.32
Exit- New Job	.00	.12	.00	-.02	.00	.12	.00	-.01
Exit- Layoff	-.09	.23	-.02	-.40	-.06	.23	-.01	-.25
New Employer- Collaborator	.24	.12	.10	1.97	.16	.12	.07	1.35
New Employer- Competitor	.26	.27	.05	.97	.20	.27	.04	.74
Employment Satisfaction	.08	.06	.07	1.37	.05	.06	.04	.79
Age	.02	.03	.04	.46	.01	.04	.02	.23
Female	-.32	.15	-.10	-2.07 *	-.36	.15	-.11	-2.38 *
Minority	.22	.14	.08	1.54	.14	.14	.05	.97
Career Motivation					.03	.08	.02	.34
Social Motivation					.20	.09	.12	2.12 *
Mission-Driven Motivation					.07	.09	.05	.80
Pragmatic Motivation					.06	.08	.04	.75
R^2	.04				.06			
$F(df)$	1.58 (10, 436)				2.11 (14, 432)			
ΔR^2	.01				.03			

* $p < .05$, ** $p < .01$

Study 2 Exploratory Analyses

Motivations by Alumni Network. Similar to the measurement invariance analyses in Study 1, the poor fit statistics when comparing Company A and Company C as well as Company B and Company C suggest that the motivation constructs are interpreted differently across the three alumni networks. To further examine between-alumni network differences, I conducted analyses to examine the differences in levels of the four motivations based on the alumni group. As seen in Table 21, there are significant differences between the alumni groups for career, pragmatic, and mission-driven motivation. Company B and Company C also significantly differ on social motivation.

Table 21. Comparison of Motivation for all 3 Networks

	Career Motivations		Social Motivations	
	<u>Mean</u>	<u>SE</u>	<u>Mean</u>	<u>SE</u>
Company A	3.82 _{BC}	0.04	3.92	0.04
Company B	3.21 _{AC}	0.04	3.89 _C	0.03
Company C	3.97 _{AB}	0.04	4.00 _B	0.03
	Mission-Driven Motivations		Pragmatic Motivations	
	<u>Mean</u>	<u>SE</u>	<u>Mean</u>	<u>SE</u>
Company A	3.20 _{BC}	0.04	3.03 _{BC}	0.04
Company B	3.47 _{AC}	0.04	3.95 _{AC}	0.04
Company C	3.68 _{AB}	0.04	3.32 _{BC}	0.04

Given the measurement invariance tests confirm that the motivation constructs are not being interpreted equivalently for a third alumni network as well as these substantial between-alumni differences in motivations, there are serious concerns about the generalizability of the motivation scale across various alumni networks. I examine this issue as well as possible solutions for future research in further detail in the general discussion section.

Involvement by Alumni Network. While the surveys for Company A and Company B measured involvement with a dichotomous scale (i.e. did not use versus use the practice), the survey for Company C measured involvement on a continuous scale. Thus, a direct comparison of the three alumni networks is not possible. However, a comparison of the most used benefits demonstrates commonalities across the alumni networks. As presented in Table 22, alumni in Company C use the newsletter and alumni portal the most. These two alumni practices are also amongst the most used practices for Company A and B.

Table 22. Most Used Benefits by Alumni Network

Company A		Company B		Company C	
<u>Alumni Practice</u>	<u>% Use</u>	<u>Alumni Practice</u>	<u>% Use</u>	<u>Alumni Practice</u>	<u>% Use</u>
Newsletter	58%	Alumni Portal	59%	Newsletter	2.47
Alumni Portal	44%	Benefits/Perks	49%	Alumni Portal	2.11
In-Person Events	43%	Newsletter	46%	Individualized Emails	2.01
Social Networking	34%	News Page	39%	News Page	1.94
Individualized Emails	31%	Individualized Emails	28%	In-Person Events	1.78
News Page	27%	Directory	27%	Directory	1.69
Job Board	27%	In-Person Events	24%	Job Board	1.60
Directory	26%	Social Networking	23%	Messaging	1.43
Benefits/Perks	8%	Job Board	18%	Benefits/Perks	0.99
Webinars	7%	Groups	18%	Social Networking	0.77
Messaging	5%	Messaging	12%		
Groups	5%	Webinars	11%		

STUDY 2 DISCUSSION

In Study 2, I explored the critical role of alumni motivations by examining how demographics affect alumni motivations as well as how alumni motivations may be differentially associated with use of individual alumni benefits. Results from these analyses suggested career motivations are negatively associated with age but are stronger for female alumni compared to male or non-binary alumni. Social motivations were stronger for women and minority alumni, and mission-driven and pragmatic motivations were stronger for minority alumni. While not hypothesized, the repeated significance of collaborator status in

current employment was notable. Across all four types, motivations were stronger when the alum was currently employed at a collaborating organization.

Findings from Study 2 analyses also strongly illustrated the important role of alumni motivations in decisions to utilize specific types of alumni benefits. Specifically, career motivations were the only type of motivation linked to use of the job board. Similarly, pragmatic motivations appeared to be the only indicator of use of benefits/perks, and social motivations were the sole significant predictors of use of in-person events and messaging features.

STUDY 3

Alumni Motivation Patterns by Person

Prior studies have found that 94% of respondents reported more than one motivation (Morrow-Howell & Mui, 1989) and 78% of respondents had two or more motivations when asked about reasons for volunteering (Okun, 1994). While scholars have acknowledged that an individual's decision to act or participate is some function of multiple underlying motivations (Knoke & Wright-Isak, 1982), at the time, they lacked the empirical tools to appropriately examine how motivations operate in combination. Since these initial investigations, new research methods have been developed in recent years (Gabriel, Campbell, Djurdjevic, Johnson, & Rosen, 2018; Wang & Hanges, 2011) that have provoked calls for research that investigate how variables operate conjointly within persons, also known as a person-centered approach (Fiss, 2011; Wang & Hanges, 2011).

The goal of a person-centered approach is to identify sub-groups of populations that display particular patterns or configurations of characteristics and subsequently determine if and how these established profiles vary in relation to antecedents and outcomes (Gabriel et

al., 2018; Wang & Hanges, 2011). This approach is in contrast to the commonly employed variable-centered approach which examines relationships of focal variables with specified criteria (Cohen et al., 2003). While a majority of motivation research has employed the variable-centered approach, in one notable exception, Geiser and colleagues (2014) adopted a person-centered approach to examine how combinations of motivations impacted the frequency of volunteering. The authors found that respondents could be grouped into six distinct profiles that had significantly different associations with volunteering frequency outcomes.

Applying a person-centered approach to alumni motivations, I expect that configurations or patterns of alumni motivations will emerge such that sub-populations of alumni can be identified. Furthermore, in light of recent arguments that configurations of variables are important for developing complex theory about cause-effect relationships (Fiss, 2011), I expect that the alumni motivation groups that emerge will demonstrate important differences in targeted outcomes of post-employment relationships. However, neither extant theory nor empirical research is available as of yet for forming a priori hypotheses about alumni motivation configurations. As such, I pose the following research questions:

Research Question 1: Are there distinct profiles of alumni based on alumni motivations?

Research Question 2: Do alumni motivation profiles exhibit different levels of Alumni Program Involvement and Post-Employment Citizenship?

STUDY 3 METHODS

Study 3 Data

I draw on the data from Study 1 to examine the research questions posed in Study 3. Data from Study 2 was not included because alumni program was measured continuously as opposed to dichotomously.

Study 3 Measures

See Study 1 for measurement details.

Analyses of Research Questions

I examined the data from an inductive, person-centered perspective. To do this, I employed latent profile analyses (LPA) to study the proposed research questions and explore the potential for alumni motivation profiles. In line with recommendations, I followed the automatic three-step procedure (Asparouhov & Muthén, 2014) using Mplus (version 8; Muthén & Muthén, 2017). The first step calls for the identification of the number of profiles that fit the data (i.e. profile enumeration). In the second step, the posterior distribution from step one is used to find the most likely class membership for each individual. Step 3 examines auxiliary variables (i.e. antecedents and outcomes) in relation to each of the profile solutions. Thus, I began the process of identifying the number of profiles with a two-profile solution and increased the number of profiles until there was no longer an improvement in model fit (Nylund, Asparouhov, & Muthén, 2007). Seven fit statistics are commonly used to evaluate each profile solution: log likelihood (LL), Akaike information criterion (AIC), Bayesian information criterion (BIC), sample-size-adjusted BIC (SSA-BIC), Lo-Mendell-Rubin likelihood ratio test (LMR), bootstrap likelihood ratio test (BLRT), and entropy (Bennett, Gabriel, Calderwood, Dahling, & Trougakos, 2016; Gabriel et al., 2018; Gabriel, Daniels, Diefendorff, & Greguras, 2015). Profiles are evaluated such that AIC, BIC, and SSA-BIC

should have smaller solutions, the entropy value should be larger and meet a minimum value of .70, and the LMR and BLRT statistics should be significant.

Based on these standards, the three-profile and the four-profile solutions are eligible for selection as the LMR and BLRT are both significant in these solutions. However, I chose the four-profile solution because the LL, AIC, BIC, and SSA-BIC were all smaller than in the three-profile solution. Furthermore, entropy was greater in the four-profile solution than in the three-profile solution which is desirable in determining the best fit².

² Given the data represents alumni from two different alumni networks, I also tested whether each of these four profiles was present in the alumni network subsamples. Comparable profile proportions were produced within each sub-sample, suggesting the results do not vary due to between-sample differences.

Table 23. Fit Statistics for Profile Structures

# of profiles	LL	FP	AIC	BIC	SSA-BIC	LMR (p)	BLRT (p)	Entropy
2	-5102.989	13	10231.978	10296.150	10254.861	0.275	0.000	0.867
3	-5014.780	18	10065.561	10154.415	10097.245	0.004	0.000	0.728
4	-4941.500	23	9929.000	10042.535	9969.485	0.000	0.000	0.833
5	-4909.449	28	9874.898	10013.115	9924.184	0.172	0.000	0.822
6	-4880.560	33	9827.121	9990.020	9885.209	0.528	0.000	0.764

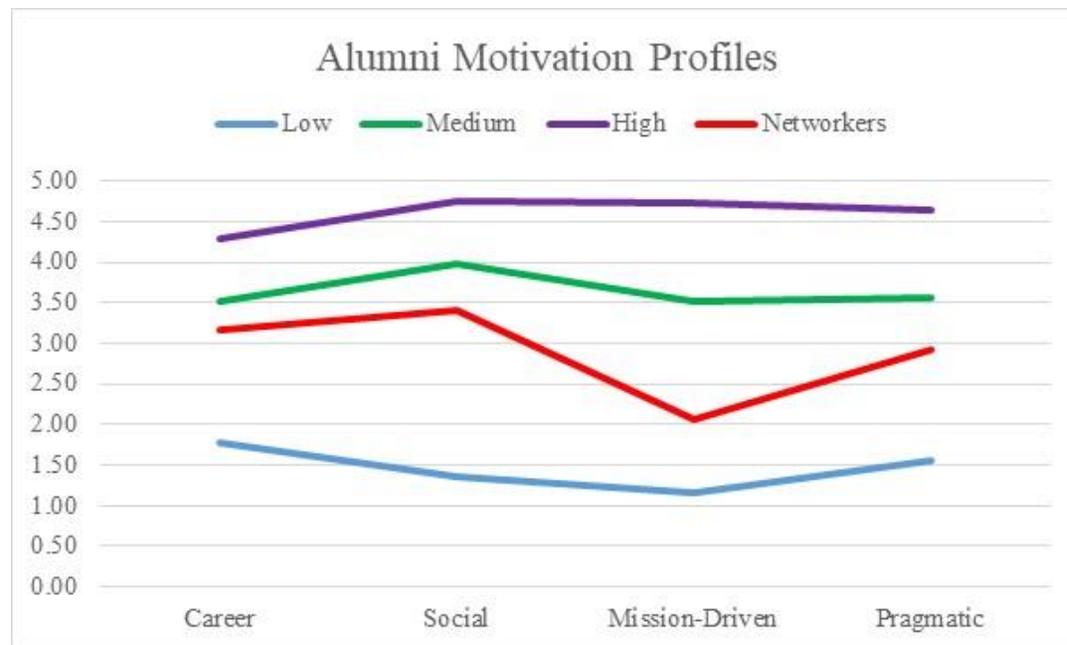
Note: LL = log-likelihood; FP = free parameters; AIC = Akaike information criteria; BIC = Bayesian information criteria; SSA-BIC = sample-size- adjusted BIC; LMR = Lo, Mendell, and Rubin (2001) test; BLRT - bootstrapped log-likelihood ratio tests. # of observations = 1,029

Alumni Motivation Profiles. The smallest profile (2%) was composed of individuals with low levels of motivation across all four motivation categories (Career Motivation M = 1.78, Social Motivation M= 1.35, Mission-Driven Motivation M=1.17, Pragmatic Motivation M= 1.55,), and I labeled this group *Low Motivation*. The largest group (75%) was composed of individuals with motivation scores that hovered around the average score (Career Motivation M = 3.52, Social Motivation M= 3.97, Mission-Driven Motivation M=3.51, Pragmatic Motivation M= 3.56), and I labeled this group *Middle Motivation*. The next group had high scores across all motivation types (Career Motivation M = 4.28, Social Motivation M= 4.76, Mission-Driven Motivation M=4.72, Pragmatic Motivation M= 4.64), and I labeled this group *High Motivation*. Finally, the last group produced scores that were higher on Career and Social Motivations (Career Motivation M =3.16, Social Motivation M= 3.40) than on pragmatic or Mission-Driven Motivations (Mission-Driven Motivation M=2.03, Pragmatic Motivation M= 2.92), and I labeled this group *Networkers*. As seen in Table 24 and Figure 3, the means of each of the four motivation types were significantly different across the motivation profiles suggesting that these profiles are categorically distinct. As such, these profiles demonstrate the existence of profiles based on alumni motivations, as proposed in Research Question 1.

Table 24. Alumni Profiles and Descriptive Information

Alumni Profile	Count	Percent	Career	Social	Mission-Driven	Pragmatic
Low	18.00	2%	1.78	1.35	1.17	1.55
Medium	769.00	75%	3.52	3.97	3.51	3.56
High	84.00	8%	4.28	4.76	4.72	4.64
Networkers	158.00	15%	3.16	3.40	2.05	2.92

Figure 3. Latent Profiles for Different Alumni Groups



A closer examination of within-profile differences using paired samples t-tests reveals more nuanced results (Figure 4). The Low Motivation group is the only profile where the average alum's Career Motivation ($M= 1.78$, $SD= 0.96$) is the strongest motivation. In fact, Career Motivation is significantly stronger than Mission-Driven Motivation ($M= 1.17$, $SD= 0.35$) for Low Motivation alumni, $t(17)= 3.41$, $p<.01$.

The Networker Group shows the greatest variation amongst the motivations. For individuals in this group, Social Motivations ($M= 3.40$, $SD= 0.78$) are significantly greater than Career Motivations ($M= 3.16$, $SD= 1.04$, $t(157)= 2.24$, $p<.05$), Mission-Driven Motivation ($M= 2.05$, $SD= 0.45$, $t(157)= 17.15$, $p<.001$), and Pragmatic Motivations ($M= 2.92$, $SD= 0.99$, $t(157)= 4.60$, $p<.001$). While individuals in this group have greater Career Motivations compared to Mission-Driven Motivations ($t(157)= 12.23$, $p<.001$) it is not significantly greater than Pragmatic motivations. Notably, Mission-Driven Motivations are the weakest motivation type for the networker groups as these motivations are significantly lower than all of the other types of motivations.

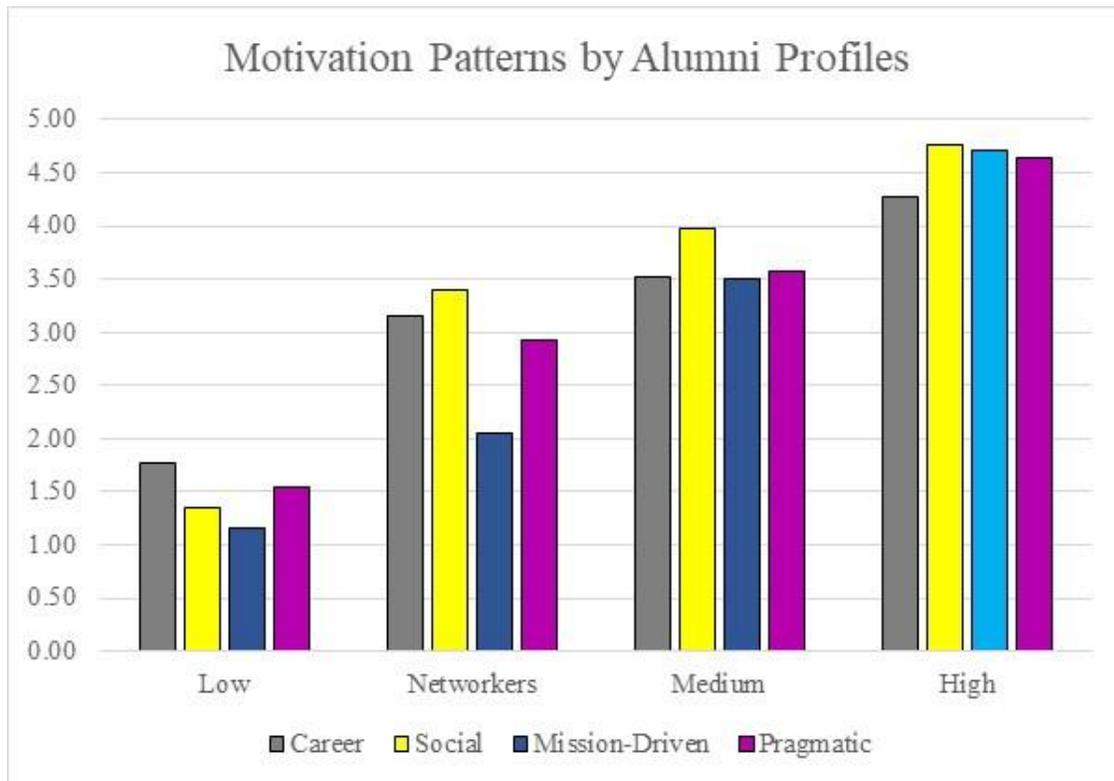
In the Middle Motivation group, Social Motivations ($M= 3.97$, $SD= 0.61$) are the single dominant motivation type as they are significantly stronger than Career Motivations ($M= 3.52$, $SD= 0.89$), $t(763)= 11.56$, $p<.01$, Pragmatic Motivations ($M= 3.56$, $SD= 0.81$), $t(767)= 11.03$, $p<.01$, and Mission-Driven Motivations ($M= 3.51$, $SD= 0.47$), $t(760)= 17.42$, $p<.01$. Notably, Career Motivations, Pragmatic Motivations, and Mission-Driven Motivations are not significantly different in the Middle Motivation Group.

Finally, in contrast to the other three motivation profiles, the High Motivation group is characterized by low Career Motivations. For this group, Career Motivations ($M= 4.27$, $SD= 0.84$), are significantly weaker than Social Motivations ($M= 4.75$, $SD= 0.43$), $t(80)= -4.43$,

p<.001), Mission-Driven Motivations (M= 4.72, SD= 0.32), t(81)= -4.48, p<.001, and Pragmatic Motivations (M= 4.64, SD= 0.58), t(80)= -3.41, p<.01. Social, Mission-Driven, and Pragmatic Motivations are not significantly different from each other for High Motivation alumni.

Taken together, the alumni profiles reveal differences in priorities between the different profile groups. These results suggest that the primary driver of motivations seems to shift as overall motivations increases. While Low Motivation alumni seem to be most strongly driven by career motivations, the primary motivation shifts towards social motivation for those with medium levels of motivation. Interestingly, those in the highest overall motivation category are least likely to be driven by career motivations.

Figure 4. Motivation Patterns by Alumni Profile



Tests of Antecedents. To model antecedents, I used the R3STEP command in Mplus (Asparouhov & Muthén, 2014; Vermunt, 2010) to run a series of multinomial logistic regressions that indicate whether an increase in the antecedent results in a higher probability that an individual belongs in one profile over another as displayed in Table 25. The main consistent finding from this analysis is that women are more likely to be in the High Motivation group than any of the other groups. In addition, as an alum's tenure in the organization increases, they are more likely to be in the middle motivation group compared to the networkers group. Finally, when an alum works in a partner organization, they are more likely to be in the high motivation group compared to the networkers group.

Table 25. Three-Step Results for Antecedents (R3STEP)

	High Vs. Middle	High Vs. Networkers	High vs. Low	Middle vs. Networkers	Middle Vs. Low	Networkers vs. Low
Sex	0.85 **	1.21 **	1.59 *	0.36	0.74	0.38
Exit-Layoff	0.37	0.50	0.94	0.13	0.58	0.44
Exit-New Job	-0.11	-0.23	-0.40	-0.12	-0.29	-0.17
Time Since Departure	0.00	0.01	0.10	0.01	0.11	0.10
Tenure	0.00	0.03	0.00	0.03 *	0.00	-0.03
Current Employer- Partner	0.50	0.89 *	0.98	0.40	0.49	0.09
Current Employer- Competitor	-1.75	-2.16	-1.26	-0.40	0.50	0.90

Note:

All values are estimated from the R3Step logistic regression analysis. Due to listwise deletion, there were 1,029 observations.

Positive values indicate an increase in the IV is more likely to be in the first category. Sex: Female =1.

***p<.01, *p<.05.*

Tests of Outcomes. To address the second research question, I used the DCON command (Asparouhov & Muthén, 2014; Lanza, Tan, & Bray, 2013) to determine if there are statistically significant differences between the profiles in the outcomes of interest. Indeed, the outcomes for Alumni Program Involvement were often dependent on motivation group. Specifically, individuals in the High and Middle Motivation groups reported significantly higher involvement in the alumni programs than those in the Networkers or Low Motivation Groups. Regarding PEC, results were significantly different for each of the four alumni profiles (See Table 26). Specifically, High Motivation alumni produced significantly higher PEC values than Middle Motivation alumni. Results for Middle Motivation alumni were significantly greater than for Networker alumni, and alumni in the Networker group had significantly higher values on outcomes than the Low Motivation alumni. These findings illustrate the benefits of examining configurations of motivations when developing complex cause-effect theory as the findings show the importance of identifying profiles of alumni rather than looking only at the independent effects of variables.

Table 26. Three-Step Results for Outcomes (DCON)

Three-Step Results for Distal Outcomes (DCON)

	High (A)	Middle (B)	Networkers (C)	Low (D)	Chi square
Alumni Program Involvement	32.90 _{C,D}	29.80 _{C,D}	20.10 _{A,B}	16.20 _{A,B}	44.86 **
Post-Employment Citizenship Behaviors	9.36 _{B,C,D}	7.53 _{A,C,D}	5.41 _{A,B,D}	3.27 _{A,B,C}	184.7 **

Note: All analyses were run utilizing the DCON procedure in Mplus. The values for Alumni Program Involvement and Post-Employment Citizenship Behaviors for all profiles are means. Alumni program involvement is the proportion of alumni program benefits used out of all benefits made available. Data were available for 1,034 participants for Alumni Program Involvement and for 1,024 participants for Post-Employment Citizenship Behaviors. Subscripts indicate the profiles that were significantly different at $p < .05$.

*** $p < .01$, * $p < .05$.*

GENERAL DISCUSSION

In light of the changing trends in the workforce with shorter tenure and increasing employee mobility, this study set out to explore whether organizations can develop post-employment relationships with former employees, and if so, understand the reasons why former employees participate. Findings from this study suggest that organizations can actively and purposefully manage post-employment relationships with former employees through innovative practices called corporate alumni programs. Post-employment relationships have the potential to be quite valuable for organizations as findings from this research suggest that users of corporate alumni programs are significantly more likely to recommend the organization's products and services and the organization as a place to work. Furthermore, the likelihood of alumni making these recommendations increases with additional benefit use.

Given the voluntary nature of these relationships, however this research also suggests that organizations should carefully consider individual differences because alumni motivations play a critical role in overall alumni program involvement as well as specific benefit use. While mission-driven and social motivations were related to overall alumni program use, results from exploratory analyses and from Study 2 found career motivations were strongly related to use of the job board while pragmatic motivations were strongly associated with use of alumni perks. Analyses examining relationships between demographics and the four motivations suggested age is negatively related to career motivations, females have stronger career and social motivations, and minority status is positively related to social, mission-driven, and pragmatic motivations.

Finally, acknowledging that there may be more than one reason driving alumni to participate in alumni programs, I adopted a person-centered approach and employed latent profile analyses to explore whether there were groups of alumni based on their motivations.

Results from these analyses indicated alumni can be categorized into 4 different latent profiles: Low Motivation, Networkers, Middle Motivation, and High Motivation. Using auxiliary latent profile analyses, I also examined antecedents and outcomes as a result of categorization into one of the four profiles. Findings suggested women tended to have higher motivations and were critical in predicting alumni program involvement and post-employment citizenship outcomes.

Theoretical Implications and Future Directions

Relationships between Alumni Involvement and Post-Employment Citizenship. This research has important implications for human resources literature as well as social exchange theory, more generally. Findings from this research provide evidence for an expanded perspective of social exchange relationships that go beyond organizational boundaries. Rather than assume that the organization and the individual stop exchanging valuable resources upon an employee's exit, this research indicates that it is possible for alumni and their former employers to sustain continued relationships. This research substantiates and adds to emerging evidence that there are "spillover" effects from employment experiences. For example, positive experiences while employed such as high quality leader-member exchange (Raghuram et al., 2017), organizational identification developed during the membership period (Mael & Ashforth, 1992), or perceptions of organizational fairness during employment (Herda & Lavelle, 2011) have been found to influence alumni's affective and behavioral reactions towards their former organization.

In contrast to these examples, however, the findings from the current research provide evidence that exchange relationships are not constrained to formal membership. Instead, this research allows for consideration that extends beyond formal employment boundaries. This extension of the social exchange framework provides an initial step into understanding post-employment relationships, but the inability to find significant relationships in exploratory

analyses highlights the need for additional research on the content being exchanged. Specifically, exploratory analyses in Study 1 did not find a significant relationship between overall alumni program involvement and outcomes related to re-employment and business development. I proposed one reason for this lack of support for a significant relationship could be restrictions on an individual's ability to contribute these types of returns.

Another possible reason for the insignificant relationships between overall alumni program involvement and these alternative outcomes is a misalignment of the content being exchanged. In his work on the norm of reciprocity, Gouldner (1960) distinguished between heteromorphic and homeomorphic reciprocity. While heteromorphic reciprocity is an exchange of different resources that are perceived to be equal in value, homeomorphic reciprocity is an exchange of identical content (Coyle-Shapiro & Shore, 2007; Gouldner, 1960). Thus, it may be that outcomes related to re-employment or business development require exchanges that are perceived to be more similar rather than an exchange of equal value. For example, it may be more appropriate to examine relationships between employment-alumni practices, such as the job board, and re-employment outcomes.

Indeed, strategic human resource management scholars employ this logic in the abilities, motivation, opportunities (AMO) framework (Jiang et al., 2012; Lepak et al., 2006). In AMO frameworks, HR practices are segmented to examine their relationships with particular outcomes (i.e. knowledge, skills, and abilities [KSAs], Motivation and Effort, and Opportunities to Contribute) which ultimately contribute to a higher order outcome of employee performance. For example, recruitment, selection, and training HR practices are expected to enhance employee KSAs while performance management, compensation and incentive practices are believed to increase employee motivation and effort (Jiang et al., 2012). Similarly, it may be that alumni

practices should be grouped to align with particular outcomes. For instance, it may be that practices that promote information about the organization such as news pages or company social networking sites are more directly related to alumni's willingness to recommend to company's products or services while alumni practices such as the job board or mentoring programs are more closely related to re-employment outcomes.

In addition, to advancing our knowledge about the content of exchanges in post-employment relationships, another potential avenue for future research involves examining the parties involved in the exchanges. Within EOR literature, researchers have often called for more clarity on the parties involved in the work relationship (Coyle-Shapiro & Shore, 2007). Research has found perceptions of the party representing the organization can vary such that employees can perceive their counterpart to be the anthropomorphized organization, the department or group they are in, or their managers. In an attempt to pre-empt similar ambiguity in post-employment relationships, future research should examine alumni perceptions about the parties involved in the relationship and how these perceptions influence motivations to participate in post-employment relationships as well as associated outcomes. It may be that if alumni perceive the post-employment relationship to be with the anthropomorphized organization, they are more likely to make recommendations for the organization more broadly. In contrast, if alumni perceive the post-employment relationship to be with a particular individual, perhaps a past manager, alumni will be more likely to offer industry insight that may be valuable to the manager or apply to work for or with the individual again. Thus, future research should investigate perceptions about involved parties and explore how these perceptions are associated with antecedents and outcomes.

Alumni Motivations as a Predictor of Involvement. A second contribution of this research is the exploration of relationships between alumni motivations and alumni program involvement. Guided by functional motivation theory (Clary et al., 1998, 1992; Clary & Snyder, 1991), I argued that alumni would have varying underlying reasons that drive them to the same behavior, involvement with the alumni program. While two of the hypotheses regarding the associations between alumni program involvement with social and mission-driven motivations were supported, the other two hypotheses for career and pragmatic motivations were not supported. Furthermore, exploratory analyses examining the proposed structural equation model for the alumni networks separately produced entirely different findings. Specifically, the analysis for Company A produced a significant relationship between career motivations and alumni program involvement while the analysis for Company B produced a significant relationship between mission-driven motivation and alumni program involvement. Thus, it appears that the targeted outcome of alumni program involvement was not simultaneously driven by various underlying motivations across alumni networks and leads me to conclude functional motivation theory is not the appropriate theoretical framework for the alumni program context. I propose two potential perspective to understand why there was mixed support for the alumni motivation hypotheses as well as provide avenue for future research.

To start, rather than expect different motivations to equally contribute to the same outcome (i.e. alumni program involvement), exploratory analyses in Study 1 and the findings in Study 2 point to more nuanced relationships. Specifically, mission-driven and social motivations are linked to a wider range of outcomes while career and pragmatic motivations are linked to specific activities. Thus, it may be that a more detailed delineation of the relationships between types of motivations and types of outcomes is necessary. For example, in the

predisposition/opportunity framework (Knoke & Wright-Isak, 1982), the authors argue that organizational incentives need to be aligned with an individual's predisposed motivations in order to elicit the desired participation in voluntary associations. Similarly, in their principle of compatibility, Ajzen and Fishbein (1970) argue for consistency in the interconnected process of attitudes and behaviors in order to see stronger statistical relationships. While the findings in this study provide an initial foundation, future research should consider research designs that explore how motivations align with specific types of alumni practices to better predict alumni involvement. As alumni programs evolve and the number of offered practices increase, future research might explore one facet of alumni motivations at a time. One possible avenue would be an examination of how career motivations are linked to other career-related benefits as they become more widely available such as career counseling for alumni, professional development training or workshops, or mentoring programs³.

An alternative to exploring the detailed linkages between the different motivations and involvement with particular practices is to create an overarching alumni motivation construct that would be generalizable across alumni network regardless of the types or quality of practices provided. For example, work motivation theorists have created and validated general measures that are applicable in various work settings (Gagné et al., 2010; Landy & Guion, 1970). Gagné and colleagues (2010) developed a Motivation at Work Scale (MAWS) which explored intrinsic and extrinsic motivation. In this scale, the authors asked respondents to indicate the degree to which statements corresponded to their personal reasons for doing a job. Rather than ask about particular aspect of work or the job, the authors developed general items for motivation such as,

³ At the time of the study, these offerings were not made available in my partner organizations or broadly. However, they are often mentioned as offering that are either in development for alumni or as future goals for the alumni program.

“Because I enjoy this work very much,” or “Because this job affords me a certain standard of living” (Gagné et al., 2010).

Similarly, future research should explore whether a general alumni motivation scale is predictive of overall alumni program involvement. The scale could include items such as, “Because I have fun participating in the alumni program,” or “Because the alumni program helps me achieve my goals.” A measure developed in this manner would target an alum’s desire to stay connected to the former employer as opposed to focusing on the underlying reasons or sub-dimensions of the alumni program. While factor analyses verified the four subdimensions of motivations, the latent profile analysis suggests an overarching alumni motivation construct would be appropriate since a majority of alumni were classified into high, medium, and low motivation profiles.

An overarching motivation construct would also warrant a revision of the alumni program involvement measure used in this study. As detailed in the Study 1 measures, I used an additive index to measure alumni program involvement. However, this operationalization assumes that each alumni practice adds unique value and does not allow for synergistic or substitutive effects. For example, the findings from exploratory analyses suggest that mission-driven motivations prompt the use of the most benefits. However, this result could simply be due to the fact that the alumni program provides more practices that offer information about the organization. It could be that any of these practices are substitutable and that inclusion of additional practices that disseminate information about the organization do not provide additional impact. In contrast, the results suggested career motivation did not significantly increase alumni program involvement, but this outcome could be due to the fact that the involvement index only included one practice that would directly address career motivations.

Other practices that address career goals could have additive or synergistic impact. Therefore, future research examining alumni program involvement should carefully consider the different possibilities for indexing this construct.

A third contribution of this literature was the identification of four types of alumni motivations as antecedents to post-employment relationships through corporate alumni programs. While we have ample evidence of what drives behaviors during the employment period (e.g. Etzioni, 1975; Gagné & Deci, 2005; Grant, 2008; Hackman & Oldham, 1976; Kanfer & Ackerman, 2004; Klein, 2014; Locke & Latham, 2002; Vroom, 1964), there is decidedly less knowledge about why a former employee may behave in ways that support their former employer. This research provides a foundation for understanding the underlying reasons why individuals decide to participate in increasingly common post-employment relationships. Additionally, the findings from this research aid in understanding how demographics influence the varying strength of motivations. Future research might expand on the characteristics that are associated with motivations. For example, findings from this research suggests that current employment strengthens all four types of employment. Thus, it may be that macro relationships (i.e. business-to-business relationships) influence the individual-organization relationship. Furthermore, prior research has explored the various reasons why employees exit organizations (Lee, Mitchell, Wise, & Fireman, 1996). It is likely that conditions of departure will play an influential role on if and why alumni choose to participate in post-employment relationships. In addition to current employer relationship and departure conditions, future research should explore other identifiers such a current industry of employment, level of education, or current supervisor status as antecedents to alumni motivations, alumni program involvement, and PEC to

develop the nomological network of post-employment relationships as well as support strategic management of alumni programs in practice.

Notably, most prior research on functional motivations did not explore the configurational effects of motivations (see Geiser et al., 2014 for an exception). Thus, this research not only advances knowledge on alumni motivations but also contributes to research on motivation more broadly by demonstrating how motivations may work in tandem. While one could conclude from a variable-centered approach that career and pragmatic motivations have little importance in determining outcomes related to alumni program involvement, results from the person-centered approach find that these motivations, along with social and mission-driven motivations, have combinatory effects on desired behavioral outcomes. As this research demonstrates the significant effects of alumni profiles on associated outcomes, future research should explore the antecedents to these profiles. For example, prior research finds that the employment experience influences affective and behavioral reactions to the organization (Herda & Lavelle, 2011; Raghuram et al., 2017), and thus, it is likely that experiences during employment or during the exit process will be predictive of motivation profiles. Because HR management researchers consider the onboarding process to be an important part of socializing new employees to develop strong EORs (Jokisaari & Nurmi, 2009; Kammeyer-Mueller, Wanberg, Rubenstein, & Song, 2013; Wanous, 1992), it may be that similarly creating a foundation for post-employment relationships is also important for “socializing” alumni. Researchers could examine how exit management strategies or employee offboarding shape the likelihood of alumni motivation profile grouping. Finally, it is likely that a range of individual characteristics such as sex, current career or life stage, or current employer will also be

influential on determining an individual's classification into an alumni profile and should be studied in the future.

Thus, far I have discussed contributions of this research and avenues for future direction based on what is occurring within the post-employment relationship. However, the growing importance of post-employment relationships may also impact other organizational relationships, specifically employee-organization relationships or potential employee-organization relationships. For example, Hoffman and colleagues (2014) argued that employees should be included in corporate alumni programs to support external networks and bring new ideas into the firm. Furthermore, they recommend advertising corporate alumni programs during the recruitment process to attract potential employees. It may be that knowledge of an extended relationship with the organization influences the content or quality of these other relationships. Future research should therefore explore the influence of post-employment relationships on relationships the organization has with other stakeholders.

Beyond developing knowledge about the post-employment relationship itself, this study also makes an important contribution by recognizing alumni as increasingly important organizational stakeholders. The results of this study suggest that in aggregate, organizational alumni are likely to be a powerful group of actors that have the ability to influence organizational success by recommending company's brand and services to others, supporting talent acquisition strategies, and strengthening the success of the alumni network itself. While this study starts to shed light on the varying characteristics of alumni in terms of motivation, continued research on understanding alumni characteristics should be given priority going forward. For example, scholars have argued that workers are now using inter-organizational career ladders to progress in their professional lives and find that workers tend to move from larger to smaller workplaces

and to organizations that employ a larger proportion of workers in the focal occupation (Bidwell & Briscoe, 2010). Drawing on these findings, future research could examine how the types of organizations that alumni work in after the focal organization or how varying post-employment career paths differentially impact the likelihood that an alumna will engage in a post-employment relationship as well as the strength of that relationship. For instance, an individual may move from a larger to a smaller organization and continue a post-employment relationship to reap the benefits of a larger network. Alternatively, the subsequent employer's competitive relationship with the focal employer is likely to be influential. An individual who moves to a client or distributor may be more likely to participate in a post-employment relationship compared to a worker who transitions to a competitor.

In their seminal study, Mael and Ashforth (1992) develop the concept of organizational identification using a university alumni sample. However, as noted previously university-alumni relationships and employee-organization relationships differ from post-employment relationships in that individuals traditionally only have one alma mater and one employer at any point in time. Thus, in these relationships an individual's identification is focused on one alma mater or one employer. However, given the trend towards boundaryless careers (Sullivan & Baruch, 2009), it is likely that an individual may be an alumnus of multiple organizations complicating the concept of alumni identification. As alumni programs grow in size and prominence, it is likely that former employers will have to compete for alumni attachment and identification. Future research should explore the ways in which individuals manage their identification with multiple former employers.

Finally, the current study demonstrated the outcomes associated with post-employment relationships that benefit the organization. Future research should explore the outcomes that may

result for alumni and how that may vary based on the individual's involvement with an alumni program. For example, some alumni programs are forming alumni advisory boards that provide individuals with heightened visibility and increased opportunities to network. It may be that these benefits produce long-term career advantages measured by objective and/or subjective career success. In addition, some alumni programs are making it possible for retirees to connect or participate in corporate volunteering events. As such, involvement in these types of alumni activities may increase an individual's life satisfaction and well-being.

Practical Implications

While the concept of alumni networks is not new to practitioners, in recent years these programs have grown considerably in prominence and importance. For example, in a survey of 60 companies with alumni programs, only 22 percent of them had an alumni program older than 10 years while 33 percent had only started an alumni program in the last 2 years indicative of increased adoption rates (Conenza, 2017). Even in early development stages, many practitioners have an idea of what they would like to achieve (e.g. brand advocacy, talent acquisition, business development, and network intelligence) and are experimenting with a wide range of traditional and innovative alumni practices. For instance, while many alumni programs implement core practices such as newsletters, networking opportunities, and exclusive discounts, some programs are experimenting with innovative programming such as organizing group trips to sporting events or providing access to celebrity speaker series (Tucker, 2018).

However, due to the infancy of these programs, practitioners are lacking the empirical evidence of the effectiveness of these programs leaving alumni managers to rely on best guesses rather than empirically-guided best practices. Indeed a majority of alumni directors feel they have low to moderate quality of data to work with and are unsure of what to measure or how

(Conenza, 2017). Results from this study take a step towards providing empirical evidence of the benefits of alumni programs. Specifically, the current results suggest that when alumni become engaged, corporate alumni programs can facilitate successful post-employment relationships that yield targeted results such as continued attachment to the organization and desirable alumni behaviors that benefit the firm. However, these results indicate nuanced paths that lead to outcomes. While some motivations such as mission-driven motivations lead to greater use of benefits, other motivations such as career or pragmatic motivations lead to more focused use of particular benefits. Ultimately the different ways in which alumni partake in alumni programs is likely to lead to varying outcomes. As such, the findings of this study suggest that organizations should either dedicate time and resources to better understand the needs and segments of their alumni group or provide a wide range of benefits that address diverse individual goals.

Limitations

Despite the strengths of this research, the findings should be interpreted considering the study's limitations. To start, one limitation is the potential for common method bias as all of the data is self-reported at a single time point. However, some research finds that common method variance does not present as significant a concern as was once assumed (Spector, 2006). In addition, while every attempt was made to reach a wide range of alumni in various alumni networks of different sizes and industries, another limitation of this study may be the possibility of selection bias in the responses received (Winship & Mare, 1992). It may be that the sample is biased towards those who are most likely to respond to the survey may also be those who are already more attached to a former employer. However, the question at the core of this research was to understand what motivated alumni to continue post-employment relationships and what types of desirable these alumni contributed back to their former employer. Thus, drawing from a

sample of alumni who do indeed participate in these relationships is likely to address the primary questions examined in this research.

CONCLUSION

In light of workforce trends towards declining employee tenure and rising employee mobility, it is time for scholars and practitioners to expand their perspectives on employee-organization relationships. Rather than assume that these relationships end upon an employee's departure from the organization, it is critical that we explore the ways in which these relationships can be extended to form post-employment relationships. This study takes a step in understanding the development and maintenance of post-employment relationships by exploring the ways that organizations can support alumni motivations and, in return, how alumni can contribute desirable behavioral outcomes back to their former employer. The findings from this study suggest that post-employment relationships have the potential to provide mutual benefits for both parties and provides various opportunities for future research that provide important theoretical and practical insights.

APPENDIX 1

Alumni Motivation Items

Career Motivations

Make networking connections to enhance my job, career, or business.
Access information or resources that help me professionally.
Explore potential employment opportunities.

Social Motivations

Connect socially with new or old friends.
Get updates about people I used to know.
Find and/or attend social events for fun.

Mission-Driven Motivations

Contribute to the organization's mission that aligns with my values.
Find opportunities/charitable purposes to give back to a meaningful cause.
Learn about how the foundation is making a positive impact in the world.

Pragmatic Motivations

Access organization-provided benefits (e.g. retirement, healthcare, etc.) that I need.
Save money with exclusive deals and promotions from the foundation.
Save time and effort finding alumni or foundation information.

APPENDIX 2

Title: Study 1 CFA with split data

Data: File is

```
"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\  
Dissertation Analyses_5.6\  
OW.Tel data for CFA_half.dat";
```

Variable:

Names =

```
ID    CoCode  
Car1  Car2  Car3  Soc1  Soc2  Soc3  
MD1  MD2  MD3  Prag1 Prag2 Prag3  
RecPS RecWrk    RecAlum    NewJob    Layoff  
Client Comp PartnerSex  FemaleNonWhite  
White Age  Useall Use01 UsePerc    Depart Tenu  
;
```

USEVARIABLE =

```
Car1  Car2  Car3  
Soc1  Soc2  Soc3  
MD1  MD2  MD3  
Prag1 Prag2 Prag3  
;
```

Missing is .;

Model:

Fact1 by

```
Car1  Car2  Car3;
```

Fact2 by

```
Prag1 Prag2 Prag3;
```

Fact3 by

```
Soc1  Soc2  Soc3;
```

Fact4 by

```
MD1  MD2  MD3;
```

APPENDIX 3

Title: CFA 1 factor

Data: File is

"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\
Dissertation Analyses_5.6\
OW.Tel data for CFA_half.dat";

Variable:

Names =

ID CoCode
Car1 Car2 Car3 Soc1 Soc2 Soc3
MD1 MD2 MD3 Prag1 Prag2 Prag3
RecPS RecWrk RecAlum NewJob Layoff
Client Comp PartnerSex FemaleNonWhite
White Age Useall Use01 UsePerc Depart Tenu;

USEVARIABLE =

Car1 Car2 Car3
Soc1 Soc2 Soc3
MD1 MD2 MD3
Prag1 Prag2 Prag3
RecPS RecWrk;

Missing is .;

Model:

CarMo by

Car1 Car2 Car3;

SocMo by

Soc1 Soc2 Soc3;

MDMo by

MD1 MD2 MD3;

PragMo by

Prag1 Prag2 Prag3;

PEC by

RecPS RecWrk;

Output: Stand Modindices;

APPENDIX 4

Title:

Dissertation Measurement Invariance_Configural;

Data:

File is

```
"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\dissertation analyses\  
Measurement Invariance\  
OW.Tel_MeasInv.dat";
```

Analysis:

Estimator = MLR;

Variable:

Names are

```
ID    CoCode  
Car1  Car2  Car3  Soc1  Soc2  Soc3  
MD1  MD2  MD3  Prag1 Prag2 Prag3  
PEC1 PEC2  RecAlum  NewJob  Layoff  
Client Comp Partner Sex  FemaleNonWhite  White  
Age  Useall Use01 UsePerc  Depart Tenu
```

;

USEVARIABLES are

```
Car1  Car2  Car3  Soc1  Soc2  Soc3  
MD1  MD2  MD3  
Prag1 Prag2 Prag3  
PEC1 PEC2
```

;

Grouping = CoCode (1=Co1 2=Co2);

Missing is .;

MODEL:

! Intercepts with labels

[Car1@0] (mean1_1);

[Car2] (mean2_1);

[Car3] (mean3_1);

[Soc1@0] (mean4_1);

[Soc2] (mean5_1);

[Soc3] (mean6_1);

[MD1@0] (mean7_1);

[MD2] (mean8_1);
[MD3] (mean9_1);

[Prag1@0] (mean10_1);
[Prag2] (mean11_1);
[Prag3] (mean12_1);

[PEC1@0] (mean13_1);
[PEC2] (mean14_1);

! Unique variances with labels

Car1 (var1_1);
Car2 (var2_1);
Car3 (var3_1);

Soc1 (var4_1);
Soc2 (var5_1);
Soc3 (var6_1);

MD1 (var7_1);
MD2 (var8_1);
MD3 (var9_1);

Prag1 (var10_1);
Prag2 (var11_1);
Prag3 (var12_1);

PEC1 (var13_1);
PEC2 (var14_1);

!Loadings with labels

CarMo by Car1 (al11_1)
Car2 (al12_1)
Car3 (al13_1);

SocMo by Soc1 (al21_1)
Soc2 (al22_1)
Soc3 (al23_1);

MDMO by MD1 (al31_1)
MD2 (al32_1)
MD3 (al33_1);

PragMo by Prag1 (al41_1)
Prag2 (al42_1)
Prag3 (al43_1);

PEC by PEC1 (al51_1)
PEC2 (al52_1);

[CarMo@1] (Comn_1a);
[SocMo@1] (Comn_1b);
[MDMo@1] (Comn_1c);
[PragMo@1] (Comn_1d);
[PEC@1] (Comn_1e);
CarMo (Fvar_1a);
SocMo (Fvar_1b);
MDMo (Fvar_1c);
PragMo (Fvar_1d);
PEC (Fvar_1e);

Model Co2:

! Intercepts with labels
[Car1@0] (mean1_2);
[Car2] (mean2_2);
[Car3] (mean3_2);

[Soc1@0] (mean4_2);
[Soc2] (mean5_2);
[Soc3] (mean6_2);

[MD1@0] (mean7_2);
[MD2] (mean8_2);
[MD3] (mean9_2);

[Prag1@0] (mean10_2);
[Prag2] (mean11_2);
[Prag3] (mean12_2);

[PEC1@0] (mean13_2);
[PEC2] (mean14_2);

! Unique variances with labels

Car1 (var1_2);
Car2 (var2_2);
Car3 (var3_2);

Soc1 (var4_2);
Soc2 (var5_2);
Soc3 (var6_2);

MD1 (var7_2);
MD2 (var8_2);
MD3 (var9_2);

Prag1 (var10_2);
Prag2 (var11_2);
Prag3 (var12_2);

PEC1 (var13_2);
PEC2 (var14_2);

!Loadings with labels
CarMo by Car1 (al11_2)
 Car2 (al12_2)
 Car3 (al13_2);

SocMo by Soc1 (al21_2)
 Soc2 (al22_2)
 Soc3 (al23_2);

MDMo by MD1 (al31_2)
 MD2 (al32_2)
 MD3 (al33_2);

PragMo by Prag1 (al41_2)
 Prag2 (al42_2)
 Prag3 (al43_2);

PEC by PEC1 (al51_2)
 PEC2 (al52_2);

[CarMo@1] (Comn_2a);
[SocMo@1] (Comn_2b);
[MDMo@1] (Comn_2c);
[PragMo@1] (Comn_2d);
[PEC@1] (Comn_2e);
CarMo (Fvar_2a);
SocMo (Fvar_2b);
MDMo (Fvar_2c);
PragMo (Fvar_2d);
PEC (Fvar_2e);

APPENDIX 5

Title: CFA 1 factor

Data: File is

"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\
Dissertation Analyses_5.6\
OW.Telstra Combined for SEM.dat";

Variable:

Names =

ID CoCode
Car1 Car2 Car3 Soc1 Soc2 Soc3
MD1 MD2 MD3 Prag1 Prag2 Prag3
RecPS RecWrk RecAlum NewJob Layoff
Client Comp PartnerSex FemaleNonWhite
White Age Useall Use01 UsePerc Depart Tenu;

USEVARIABLE =

Car1 Car2 Car3
Soc1 Soc2 Soc3
MD1 MD2 MD3
Prag1 Prag2 Prag3
RecPS RecWrk
Useperc
female
Depart Tenu
NewJob Layoff
Comp Partner ;

Missing is .;

Model:

CarMo by
Car1 Car2 Car3;

SocMo by
Soc1 Soc2 Soc3;

MDMo by
MD1 MD2 MD3;

PragMo by
Prag1 Prag2 Prag3;

PEC by

RecPS RecWrk;

Useperc on
carumo socmo mdmo pragmo
female
Depart Tenu
NewJob Layoff
Comp Partner;

PEC on Useperc
carumo socmo mdmo pragmo
female
Depart Tenu
NewJob Layoff
Comp Partner;

Newjob with layoff;
depart with tenu;
comp with partner;

Output: Stand Modindices;

APPENDIX 6

Title: LPA 2 profile

Data: File is

```
"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
SAP_LPA_5.14.dat";
```

Variable:

Names =

```
ID    RecPS RecWrk    Emp Sat    Layoff Fired  NewJob  
Compet    Collab FemaleWhite NonWh    AgeRec1  
Useall Use01 UsePerc    Depart Tenu  
CarMo Socmo MDMo    PragMo  
Attach Pride  
APortU    DirU  NewsUMssgU JobU  
BenU SNetU NltrU  EmlU  InPrU  
TotAwr    PEC;
```

USEVARIABLE =

```
CarMo SocMo MDMo    PragMo;
```

Missing is .;

```
classes = c(2);
```

analysis:

```
type = mixture;
```

Savedata:

```
file is "\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
2profile.csv";  
save is cprob;  
format is free;
```

Plot:

```
type is plot3;
```

series is

```
CarMo (1)    SocMo(2)    MDMO(3)  
PragMo (4)    ;
```

Output: tech11 tech14;

APPENDIX 7

Title: LPA 2 profile

Data: File is

```
"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
SAP_LPA_5.14.dat";
```

Variable:

Names =

```
ID RecPS RecWrk Emp Sat Layoff Fired NewJob  
Compet Collab FemaleWhite NonWh AgeRec1  
Useall Use01 UsePerc Depart Tenu  
CarMo Socmo MDMo PragMo  
Attach Pride  
APortU DirU NewsUMssgU JobU  
BenU SNetU NltrU EmlU InPrU  
TotAwr PEC;
```

USEVARIABLE =

```
CarMo SocMo MDMo PragMo;
```

Missing is .;

```
classes = c(4);
```

```
Auxiliary = Female (R3STEP)
```

```
invol (R3STEP)
```

```
deprec (R3STEP)
```

```
supstat (R3STEP);
```

analysis:

```
type = mixture;
```

Savedata:

```
file is "\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
2profile.csv";
```

```
save is cprob;
```

```
format is free;
```

Plot:

```
type is plot3;
```

series is

```
CarMo (1) SocMo(2) MDMO(3)
```

```
PragMo (4) ;
```

Output: tech11 tech14;

APPENDIX 8

Title: LPA 2 profile

Data: File is

```
"\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
SAP_LPA_5.14.dat";
```

Variable:

Names =

```
ID RecPS RecWrk Emp Sat Layoff Fired NewJob  
Compet Collab FemaleWhite NonWh AgeRec1  
Useall Use01 UsePerc Depart Tenu  
CarMo Socmo MDMo PragMo  
Attach Pride  
APortU DirU NewsUMssgU JobU  
BenU SNetU NltrU EmlU InPrU  
TotAwr PEC;
```

USEVARIABLE =

```
CarMo SocMo MDMo PragMo;
```

Missing is .;

```
classes = c(4);
```

```
Auxiliary = UseAll (DCON)
```

```
RECPS(DCON)
```

```
REWORK(DCON);
```

analysis:

```
type = mixture;
```

Savedata:

```
file is "\\rschfs1x\userRS\R-Z\rmp239_RS\Documents\Dissertation analyses\LPA\  
2profile.csv";
```

```
save is cprob;
```

```
format is free;
```

Plot:

```
type is plot3;
```

series is

```
CarMo (1) SocMo(2) MDMO(3)
```

```
PragMo (4) ;
```

Output: tech11 tech14;

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