

ABSTRACT

ENGLE, DEBORAH LYNN. Factors that Predict Organizational Commitment for Full-time and Part-time Faculty in Community Colleges across North Carolina. (Under the direction of Duane Akroyd.)

Organizational dependence on part-time employees is a relatively recent trend across the modern landscape of the American workforce and is especially apparent in higher education. At community colleges across the country, as well as in North Carolina, there is a substantial reliance on part-time faculty employment. This is common practice in order to reduce institutional costs and to maintain institutional flexibility in curricular offerings. As community colleges' dependence on part-time faculty continues, it becomes apparent that these employees are critical to the success of these institutions. Despite the widespread employment of part-time faculty, there is little known about the commitment levels of these faculty, or even the levels of their full-time counterparts. The purpose of this study was to investigate the predictive value of several variables on organizational commitment for both full-time and part-time faculty in community colleges across North Carolina. The study utilized the Meyer and Allen (1991) three-component model of organizational commitment which proposes that individuals become committed for any of three psychological reasons labeled as affective, continuance, and normative.

The dataset consisted of faculty responses on a web-based survey distributed to 26 North Carolina community colleges. Using analysis of variance (ANOVA), this study compared levels of organizational commitment between full-time and part-time faculty. Results showed that mean scores of affective, continuance and normative commitment were significantly higher for full-time faculty than part-time faculty. Using multiple regression,

this study examined how organizational, alternatives/transferability, rewards and demographic variables predict organizational commitment for full-time and part-time faculty. Generally, regression analyses showed that organizational support, extrinsic rewards, age and education level were significantly predictive of all three commitment components, for both full-time and part-time faculty. Furthermore, regression analysis indicated that extrinsic financial rewards have a significant negative influence on affective commitment for part-time faculty.

Factors that Predict Organizational Commitment for Full-time and Part-time Faculty in
Community Colleges across North Carolina

by
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DEDICATION

To my loving family and friends, who have taught me much about commitment.

BIOGRAPHY

Deborah Lynn Engle was born on May 17, 1974 in St. Louis, Missouri. After graduating from Fox Senior High School in 1992, she attended Truman State University (formerly Northeast Missouri State University) in Kirksville, Missouri. She graduated in May of 1996 with a Bachelor of Science degree in Biology. She continued her studies and earned a Master of Science degree in Biology at Truman State University in 1997. Her thesis examined the transepithelial molecular transport of glucose by intestinal segments of largemouth bass.

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CHAPTER ONE: INTRODUCTION

Organizational Commitment

The nascent dependence on part-time employees in organizations represents a relatively recent trend across the modern landscape of the American workforce. As a result, the relationship between organizations and employees is shifting. There is considerable debate about whether organizations and employees are, or should be, mutually committed in the midst of the rapidly changing world of work.

An employee's commitment to the organization is referred to as organizational commitment. Over the past 50 years, there have been a multitude of definitions of organizational commitment to arise from the literature. This variety is derived from the various scholarly conceptualizations of organizational commitment (Mowday, Porter, & Steers, 1982). According to Meyer and Allen (1997), "common to all conceptualizations of commitment is the notion that commitment binds an individual to an organization" (p. 13).

The theory, or conceptualization, that is framing this study derives from Meyer and Allen's (1997) research on commitment. They propose that individuals become committed for any of three psychological reasons labeled as affective, continuance, and normative. Affective commitment is viewed as an individual's "emotional attachment to, identification with, and involvement with the organization" (Meyer & Allen, 1997, p. 11). In continuance commitment, an employee chooses to stay with an organization due to an awareness of the costs associated with leaving it. In normative commitment, an individual continues employment due to a sense of obligation. Each of these three components of organizational

commitment may be experienced simultaneously and at different levels by all individuals in an organization (Meyer & Allen, 1997).

Community College Faculty

Organizational dependence on part-time employees is especially apparent in higher education. Across the United States, the number of part-time faculty members has increased by 79% between 1981 and 1999 (Walsh, 2002). In North Carolina community colleges, the total number of part-time faculty swelled from 9,093 in the year 2000 to 14,375 in 2006, representing greater than a 50% increase in just six years (North Carolina Community College System, 2006). Wallin (2004) suggests these dramatic increases in the employment of part-time faculty are significantly due to the economic recession during this period and concurrent large enrollment of students in college.

And just who are the part-time faculty? Data collected from the 2004 National Survey of Post-secondary Faculty (NSOPF) portray a demographic picture of these employees. Like their full-time counterparts, part-timers are equally likely to be men or women, the majority self-identify as white, and their mean age is about 49 years old. As for educational attainment, 9% of part-timers hold doctoral degrees while 18% of full-time faculty hold the same degree. Research has yet to show that there is a difference in quality of instruction between these two faculty groups (Leslie & Gappa, 2002).

Additional analysis of the 2004 NSOPF data shows that just 11% of adjunct faculty hold multiple part-time teaching positions in order to amass an annual salary (Eagen, 2007). Interestingly, 72% are employed elsewhere in non-teaching positions (Eagen, 2007). Wallin (2004) cites Rifkin's (2000) work when she states: "because [part-timers] are usually

employed elsewhere, they may not have the commitment to the college that is more typical of full-time faculty” (p. 380).

At the same time that Wallin (2004) makes her assessment of the commitment level for part-time faculty using data cited above, an opposite perspective may be drawn from other evidence. Data from the 2004 NSOPF show that the average number of years part-time faculty are employed at a single institution is 7.0 years, representing a more than 1.5 year increase from the 5.3 year average reported in the 1999 NSOPF (Eagen, 2007). Average length of employment results from both the 1999 and 2004 NSOPF datasets suggest that part-time faculty are indeed committed to the institution.

As demonstrated, there are at least two divergent perspectives about commitment among part-time faculty that exist in the literature. One perspective is that part-time faculty are not as committed to their organizations as their full-time counterparts; the other is that they are just as committed as the full-timers. Clearly, more research is needed to clarify the level of organizational commitment and the factors that influence it for both part-time and full-time faculty employees at community colleges.

Statement of the Problem

Provasnik and Planty (2008) report for the National Center for Education Statistics that over two-thirds of community college faculty across the United States were employed part-time (over 240,000 faculty), while one-third of community college faculty were employed full-time. These national statistics mirror the faculty employment data for North Carolina. In North Carolina, 70% of the state’s community college faculty are part-time, while 30% are full-time employees (North Carolina Community College System, 2006).

Explanation for this substantial reliance on part-time faculty is offered by Cohen and Brawer (2003):

The reasons part-timers continue to be employed in sizable numbers are that they cost less; they may have special capabilities not available among the full-time instructors; and they can be employed, dismissed, and reemployed as necessary (p. 85).

Flexibility in hiring and dismissal of low-cost, part-time faculty allows community colleges to quickly adapt during periods of waxing and waning student enrollment. Yet, this practice may marginalize part-time faculty since compensation, benefits, collegial esteem, and a quality work environment are often reduced or even absent (Pratt, 1997). Frequently, part-time faculty are teaching the same courses and content as their full-time counterparts, while enduring financial inequities in salary, benefits, and professional development (Wallin, 2005).

As community colleges' dependence on part-time faculty continues, it becomes apparent that these employees are critical to the success of these institutions (Wallin, 2005). Despite this criticality, part-time faculty are "treated as disposable commodities, an expendable contingent work force" (Wallin, 2005, p. 13), are viewed as "indentured servitude" (Yoshioka, 2007, p. 41), and metaphorically linked to "migrant workers to the farms" (Cohen and Brawer, 2003, p. 86). In light of these circumstances, the debate continues whether community colleges and faculty are, or should be, mutually committed. Analyzing levels of organizational commitment and understanding how it is developed for individual employees is therefore a timely and important endeavor for this group. Moreover,

there has been little research that attempts to examine and compare commitment levels for full-time and part-time community college faculty.

Over the past five decades, many scholars have attempted to identify and measure organizational commitment. Initially, organizational commitment was conceptualized by Becker (1960) as an individual's calculating, or rational, choice to continue employment at an organization. Later, organizational commitment was conceptualized by Mowday, Porter, & Steers (1982) as an individual's attitudinal and behavioral commitment to the organization. Nearly all, if not every published study and dissertation dated in the late 20th century, incorporate this approach to organizational commitment.

Over the past 25 years, researchers have observed limitations of this early model of organizational commitment and have argued that it did not fully explain how an individual becomes committed to an organization (Mayer & Schoorman, 1998). Most notably, Meyer and Allen (1990) re-conceptualized organizational commitment as a multi-dimensional construct consisting of three components: affective, continuance, and normative commitment. Affective commitment is an employee's emotional attachment to his/her organization – the employee remains working at the organization because he/she wants to. Continuance commitment is exhibited when an employee stays at an organization, not because he/she wants to remain there, but because she/he is aware of the costs associated with leaving. Normative commitment is when an employee remains at an organization out of a sense of obligation to stay there. Meyer and Allen's (1991) newer conceptualization of organizational commitment as a three-component model has become a widely-accepted theoretical framework in commitment research (Meyer, Becker, Vandenberghe, 2004).

The literature has shown that organizational commitment may be influenced by a variety of antecedents, or factors. In a meta-analysis of 155 international publication articles, dissertations, and unpublished manuscripts and meeting presentations, Meyer and associates (2002) studied the correlations of several antecedent variables with all three components of commitment. They found that demographic variables (age, organization tenure) correlated positively with all three commitment components; that work experience variables (role ambiguity, role conflict) were more strongly and negatively correlated to affective commitment; that both organizational support and procedural justice were highly correlated to affective commitment and, to a lesser extent, normative commitment; that the availability of job alternatives variables, the transferability of education and transferability of skills were more strongly and negatively correlated to continuance commitment.

Most studies utilizing Meyer and Allen's framework have been conducted in organizations outside of higher education. Only about 100 studies in the last 25 years have specifically addressed organizational commitment among post-secondary faculty. The results of these studies have demonstrated that antecedent variables such as role ambiguity and role conflict (Gormley, 2005), organizational support (Carver, 2005; Messer, 2006), gender (Taylor, 2005; Ching, 2004; al-Kahtani, 2004; Huang, 2004), age (al-Kahtani, 2004; Carver, 2005; Taylor, 2005; Thomas, 2008), mentor assignment (Carlson, 2005), servant leadership (Drury, 2004), intrinsic rewards (Carlson, 2005; Coberly, 2005), extrinsic rewards (Coberly, 2005), length of employment (Flynn, 2000; Huang, 2004; Thomas, 2008), education level (al-Kahtani, 2004; Borchers & Teahen, 2001) and academic rank (Huang,

2004; Simcox-Myers, 2003) are significant correlates to the various components of, or to overall, organizational commitment for higher education faculty.

Only seven studies in the last 25 years were discovered that specifically address organizational commitment among community college faculty. Of these, only one study has specifically examined commitment as a function of full-time or part-time employment status.

This study incorporated Mottaz's conceptualization of organizational commitment. Speier-Bowman (1995) compared organizational commitment levels in her model of work satisfaction among full-time and part-time community college faculty at four institutions in Denver. Results of this study showed that overall commitment levels were not different among faculty based on employment status. The study also showed that commitment, along with work involvement, was a significant predictor of work satisfaction.

No known studies have purposely modeled organizational commitment for community college faculty as a function of their full-time or part-time employment status using Meyer and Allen's conceptualization of commitment.

Purpose

The purpose of this study was to examine how North Carolina community college full-time faculty compare to part-time faculty in their level of organizational commitment. Additionally, the purpose of this study was to investigate the predictive value of demographic, organizational, job alternatives/transferability, and reward variables on organizational commitment for these faculty. Figure 1 represents the conceptual model for this study.

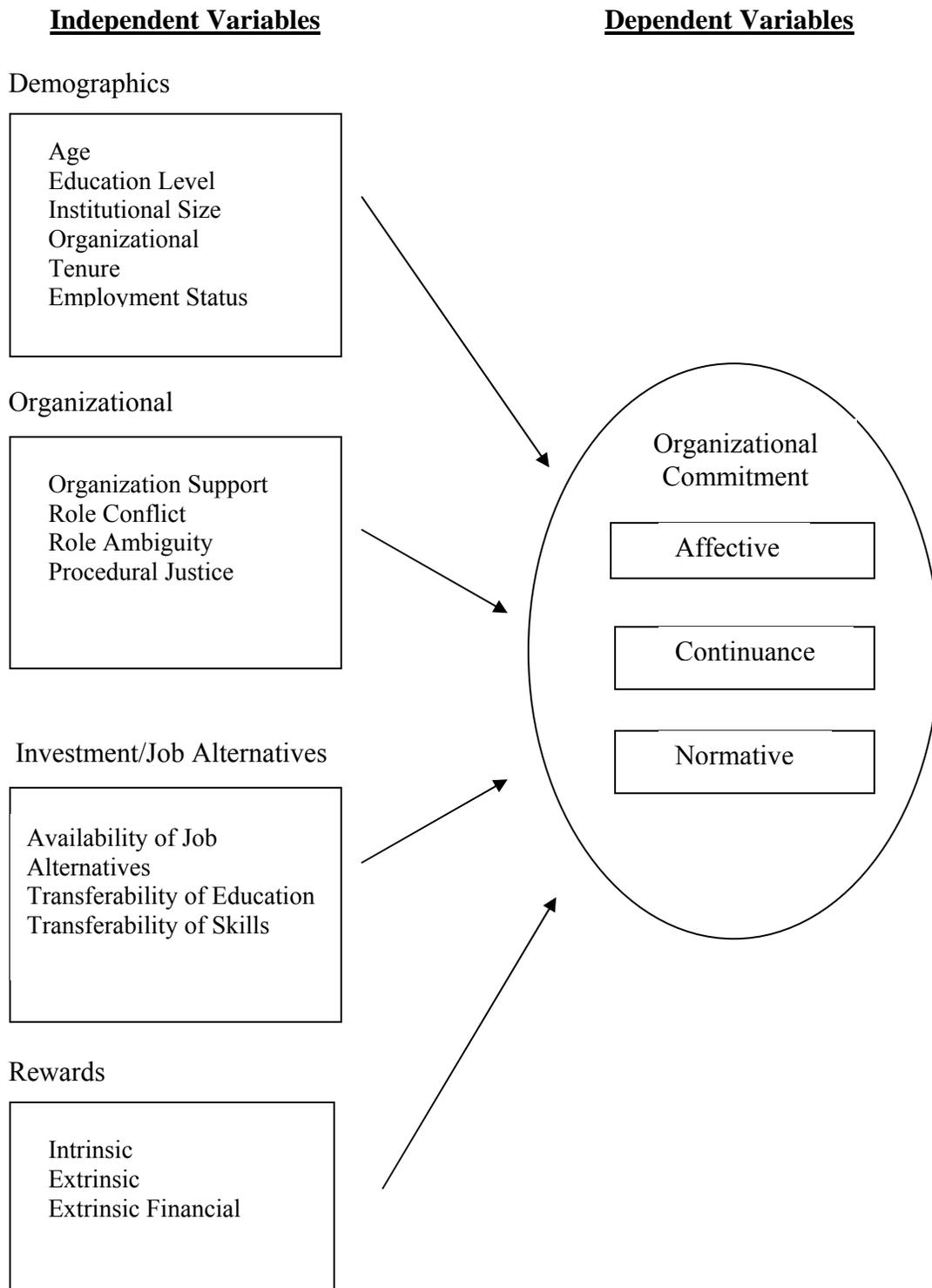


Figure 1: Conceptual model of factors that impact the organizational commitment of full-time and part-time faculty at North Carolina community colleges

Research Questions

This study addressed the following four research questions:

Research Question 1: How do the mean levels of affective, continuance, and normative commitment for full-time faculty compare to mean levels of commitment for part-time faculty in North Carolina community colleges?

Research Question 2: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic financial) and demographic (age, education level, institution size, organizational tenure) variables on *affective* commitment for full-time and for part-time community college faculty?

Research Question 3: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic financial) and demographic (age, education level, institution size, organizational tenure) variables on *continuance* commitment for full-time and for part-time community college faculty?

Research Question 4: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic financial) and demographic (age, education level, institution

size, organizational tenure) variables on *normative* commitment for full-time and for part-time community college faculty?

Operational Definition of Terms

Operational definitions of the independent and dependent variables used in this study are provided below to help clarify terminology. They are listed in alphabetical order.

Affective commitment - one of three components of commitment, defined as the “emotional attachment to, identification with, and involvement with the organization” (Meyer & Allen, 1997, p. 11). Affective commitment is perceived as the most desirable component of commitment since employees remain at an organization because they *want* to work there.

Availability of job alternatives - the availability of a comparable job in another organization

Continuance commitment - one of three components of commitment defined by Meyer and Allen (1991) as the form of commitment employees exhibit when they stay with an organization, not necessarily because they want, but because they are aware of the costs associated with leaving it.

Extrinsic rewards – combination of both extrinsic organizational and social rewards

Extrinsic financial rewards - rewards that originate from a source external to the person that serve to compensate and recognize employees for their work in the organization. In this study, the external source is the community college organization itself. The financial rewards for the faculty member include salary increases and promotion.

Extrinsic organizational rewards - rewards that originate from a source external to the person that serve to facilitate or motivate performance in an employee In this study, the external source is the community college organization itself. The organizational rewards for the

faculty member include professional development opportunities, non-salary benefits, access to equipment, etc.

Extrinsic social rewards - rewards that originate from a source external to the person that are derived from interacting with other humans while at the workplace. In this study, the external source is the community college organization itself. The social extrinsic rewards for the faculty members are the degree to which colleagues assist them at their job.

Intrinsic rewards - rewards that originate from an internal source and are directly associated with an employee's job. In this study, the community college faculty member is the internal source and the intrinsic reward is the value the faculty member places on teaching.

Normative commitment - one of three components of commitment, defined by Meyer and Allen (1997) as an individual who continues employment due to a sense of obligation.

Organizational support - an employee's beliefs about the extent to which an organization cares about his/her well-being and to which the organization values his/her contributions (Fuller, Hester, Barnett, Frey and Relyea, 2006).

Procedural justice - the perception an employee holds of the fairness of the processes and procedures used by an organization (Hopkins & Weathington, 2006).

Role ambiguity - the existence and clarity of requirements that serve to guide an employee's behavior in his/her work role and to provide knowledge that the behavior is appropriate (Rizzo, House and Lirtzman, 1970).

Role conflict - involves contradictory demands from two or more roles at the same time

Transferability of education - the extent to which employees believe their formal education could be transferred to another organization (Allen & Meyer, 1990).

Transferability of skills - the extent to which employees believe their organization-based skills could be transferred to another organization (Allen & Meyer, 1990)

Significance of the Study

Results of this study may contribute to the organizational commitment literature and to have implications for practice across American community colleges. By examining faculty organizational commitment through the lens of Meyer and Allen's (1991) conceptualization of the construct, this study adds to the literature in several ways. To begin, this is the first study in which the conceptual framework will be applied to community college faculty, taking into account their full-time or part-time employment status. No known studies have addressed organizational commitment in this manner. Second, this study will begin to establish a mean level of affective, continuance and normative commitment for both full-time and part-time community college faculty. To date, the literature consists of studies that report mean levels of commitment for faculty at four-year institutions of higher education, but none specifically address community college faculty. Finally, this study will develop a more comprehensive model of organizational commitment. Inclusion of organizational, job alternatives/transferability, reward and demographic variables into the model will add to the literature for organizational commitment as well as for higher education faculty.

Community college leaders will find the results of this study useful as they work to develop a committed faculty. By examining how commitment levels of full-time faculty compare to part-time faculty, this study identifies institutional practices that build commitment in all faculty. Specifically, if community colleges invest in a supportive and

rewarding work environment, then clearly the benefit will be a long-term and stable workforce. The results of this study may also aid leaders in addressing issues related to variables that impede organizational commitment. The inclusion of a variety of role, alternative and transferability variables helps to identify the variables that may allay the development of commitment in both full-time and part-time faculty. In finding ways to enhance commitment in all faculty, community colleges can identify and create the practices that may in turn lead to a healthy, productive faculty workforce who are committed to staying at their colleges.

CHAPTER TWO: REVIEW OF THE LITERATURE

Introduction

This chapter provides a background on what is known about full-time and part-time community college faculty and their role in the higher education workforce. Additionally, this chapter explores organizational commitment theory as a framework for examining how community college faculty develop organizational commitment. Past research that has investigated organizational commitment for all post-secondary faculty, as well as community college faculty, is presented to provide insight into how faculty experience their work.

Demographic and Employment Profile of Community College Faculty

There are 1,100 public community colleges across the United States that employ about 360,000 individuals, representing one-third of the total American higher education professoriate (Provasnik & Planty, 2008; Rifkin, 2000). Data from the 1988, 1993, 1999 and 2004 National Study of Postsecondary Faculty (NSOPF) provide a demographic and employment profile of these instructors over time. In an effort to provide the most current and accurate profile of community college faculty, data from the most recent NSOPF are presented where applicable in the following paragraphs.

According to the 2004 NSOPF data, American community college faculty were equally likely to be male or female. Unlike the gender parity among community college faculty, racial diversity was not reflected in the 2004 data -- individuals who identified as white represented more than 82% of all community college faculty. The average age of faculty was 49.4 years in 2004. When the above demographic data were disaggregated

according to full-time and part-time employment status, there were no significant differences between the faculty groups (Eagen, 2007).

Differences between the faculty groups became apparent with regard to educational attainment. In 2004, more than 60% of full-time faculty earned a Master's degree, compared to about 50% of part-time faculty. Moreover, the number of full-time faculty who earned a doctorate (about 18%) was twice that of their part-time counterparts (about 9%). On the other hand, part-time faculty who earned a Bachelor's degree or a professional degree was about twice that of full-time faculty (Eagen, 2007).

The number of credit hours taught by community faculty has risen over the years. In 1988, full-time faculty taught 15.5 hours per week; that figure increased to 17.8 hours per week in 2004. Likewise, the number of credit hours taught by part-time faculty grew from 7.5 hours per week in 1988 to 8.5 hours per week in 2004. Relative to full-time faculty, a larger proportion of part-time faculty teach in the arts and sciences (Eagen, 2007).

The salaries for faculty have not kept pace with the gradual increase in workload over time. Trend analysis of the 1988, 1993, 1999 and 2004 NSOPF salary data show that salaries paid by community colleges for full-time faculty increased between 1988 and 1993, dropped in 1999 and then rose again in 2004. The trend in salary was different for part-time faculty whose community college wages increased between 1988 and 1993, then dropped in 1999 and in 2004 (Eagen, 2007).

Finally, in spite of the roller coaster trends seen in salary earnings, the percentage of time that both full-time and part-time faculty spent on professional development activities

has increased over time. According to 1999 NSOPF data, full-time faculty spent 6.5% of their time on these activities while part-time faculty spent 5.9% (Eagen, 2007).

Part-time Community College Faculty

A relatively recent trend across the modern landscape of the American workforce is the growing dependence on part-time employees. This trend is especially apparent in higher education. According to Wallin (2004), “the number of part-time faculty members [in higher education] increased by 79% from 1981 to 1999, to more than 400,000 out of a total of one million instructors overall” (p. 374). American community colleges markedly reflect this trend. According to Provasnik and Planty (2008) reporting for the National Center for Education Statistics, over two-thirds of two-year college faculty are part-time and one-third are full-time employees. In North Carolina community colleges, the total number of part-time faculty swelled from 9,093 in the year 2000 to 14,375 in 2006, representing greater than a 50% increase in just six years (North Carolina Community College System, 2006).

Just as the proportion of part-time community college faculty has escalated, the enrollment in undergraduate institutions has also boomed. According to Aslanian (2001), undergraduate enrollment has increased nearly 70% percent from 1970 to 1997. In particular regard to community colleges, about 60% of students who enroll at two-year/community are 24 years or older and are financially independent (Provasnik & Planty, 2008). Given that most community college mission statements across more than 1,100 institutions in the United States include a commitment to teaching/learning and the fostering of lifelong learning, the faculty (whether they are full-time or part-time) are at the heart of implementing and achieving this mission (Vaughn, 2000). Indeed, American community colleges may be

viewed as the primary centers for formal adult learning and education. Within this context, there lies an important intersection where significant numbers of adult learners interrelate with part-time faculty.

In light of the substantial population of part-time community college faculty, the definition of these employees is neither “uniform nor consistent” (Wallin, 2004, p. 377). There are a variety of designations, including “part-time faculty, adjunct faculty and contingent laborer” (Yoshioka, 2007, p. 45). According to Wallin (2004), this variance in titles for part-time community college faculty “speaks volumes about their ambiguous place in the workforce” (p. 374). Yoshioka (2007) echoes this sentiment by saying these names “immediately identify our second-class status” (p. 45).

Perhaps this ambiguity is partly due to the multiple roles that part-time faculty fulfill in the community college. Jacobs (1998) describes four reasons that college hire part-timers: 1) to teach multiple sections of courses; 2) to substitute for full-time faculty who are on leave or have permanently left the position; 3) to teach courses with unanticipated enrollment; and 4) to teach those courses in which much student supervision is required, such as nursing clinicals.

From these multiple titles and roles of part-time faculty within community colleges, it is evident that clarification is needed in order to classify them. The National Education Association provided the following definitions in 1988 (as cited in Wallin, 2004, p. 377-378):

1. Part-time faculty members – instructors who have less than a full-time teaching load and are usually compensated at a rate below that of a regular full-time faculty.

2. Temporary faculty members – full-time appointees, retained on a short-term basis, usually for a year or two, and for special purposes without reasonable expectation of continuing, long-term employment at the institution.
3. Regular, full-time faculty – those faculty, nontenured or tenured, who are on the tenure track and enjoy full faculty status.

Given this classification scheme, just who are these part-time faculty? Data collected from the 2004 National Survey of Post-secondary Faculty (NSOPF) portray a demographic picture of these community college employees. In comparison to their full-time counterparts, part-timers are equally likely to be men or women. Faculty who identify as white represent about 82% of the community college faculty as a whole. There is no significant difference in mean age between full-time and part-time faculty, with the mean being about 49 years of age. As for educational attainment, more than 60% of full-time faculty have earned a Master's degree, compared to about 50% of part-time faculty. Moreover, the number of full-time faculty who earned a doctorate (about 18%) was twice that of their part-time counterparts (about 9%). On the other hand, part-time faculty who earned a Bachelor's degree or a professional degree was about twice that of full-time faculty (Eagen, 2007).

The 2004 NSOPF provided some data regarding the pedagogical practices of community college faculty. These data showed that full-time faculty were more likely to assign group projects than part-time faculty. The data also showed that full-time and part-time faculty used similar assessment practices, in terms of using essay and short-answer questions on exams.

Beyond the 2004 NSOPF dataset, there have been few studies about effectiveness of undergraduate instruction by part-time faculty. Some have asserted there is no difference in

quality of instruction between full-time and part-time faculty (Baldwin & Chronister, 2001; Chronister & Baldwin, 1999; Gappa & Leslie, 1993; Roueche, Rouche, & Milliron, 1995). Yet, Umbach (2007) has reported empirical evidence that part-time faculty at four-year institutions underperform in teaching of undergraduates compared to their tenured/tenure track counterparts. The part-time faculty in Umbach's study interacted with students less frequently, used active and collaborative techniques less often, spent less time preparing for class, and had lower academic expectations than their tenured and tenure-track peers. Murphy (2009) challenged these findings in her study that showed that contingent faculty used more effective teaching methods and spent more time advising students than tenured/tenure-track faculty. Jaeger and Eagen (2009) reported the probability of completing an associate's degree in the California community college system modestly decreased as students were exposed to part-time faculty.

It is important to note that the use of part-time, or adjunct, faculty is not a new phenomenon within higher education. In the late 19th and early 20th centuries, adjunct faculty were those who were experts in their fields. They were valued by colleges and universities for their specializations and, as such, they would travel between institutions as visiting professors. Gappa (1984) states that "experts were engaged to teach part-time, and institutions exchanged visiting scholars to broaden their offerings" (p. 2). As a whole, adjuncts were regarded with prestige and afforded high status among the professoriate.

Today, adjunct faculty continue to bring expertise from outside industry as well as professional knowledge to the classroom. And as community colleges' dependence on part-time faculty continues, it becomes apparent that these employees are critical to the success of

these institutions (Wallin, 2005). Part-time faculty are teaching the same courses and content as their full-time counterparts. From this perspective, they are highly skilled and trained assets to their colleges. They are specialized labor (Levin, 2007). At the same time, part-time faculty have become a “contingent and expendable workforce that allows colleges to quickly respond to changing environmental conditions while saving considerable dollars by not employing full-time faculty” (Wallin, 2004, p. 375). From this opposite perspective, part-time faculty are a less-skilled group that are a means to economic efficiency (Wagoner, 2007). They are contract labor (Levin, 2007).

This contradiction in perspectives demonstrate the marginalization of part-time faculty since compensation, benefits, collegial esteem, and the quality work environment are often reduced or even absent (Pratt, 1997). Cohen and Brawer (2003) maintain that “part-time instructors are to the community college as migrant workers are to the farms” (p. 86). Yoshioka (2007) states the work of part-time faculty in California community colleges is “indentured servitude” (p. 41). According to the study conducted by Weisman and Marr (2002), community college faculty currently rank below the rest of higher education in prestige; and part-time faculty are at the very bottom of the academic hierarchy.

Examples of financial inequities in salary, benefits, and professional development for part-time faculty are apparent in the literature (Wallin, 2005). Few colleges in this country offer benefits in the form of health insurance or retirement to part-time faculty (Wallin, 2004). Research examining levels of satisfaction showed that full-time faculty were significantly more satisfied with job security, advancement opportunities, salary (Wagoner, 2007b) and benefits (Akroyd & Caison, 2005; Wagoner, 2007b) than part-time faculty.

Moreover, adjunct faculty have few opportunities for professional development (Wallin, 2004). In essence, colleges perceive part-time faculty as “second-class citizens” (p. 373).

In light of these rather dire circumstances, why then do part-time faculty teach? What is their motivation? Gappa (1984) states the reason:

In varying degrees, part-timers are resentful and frustrated (with much justification), but on balance, they are satisfied enough to continue. Less interested in money than in other rewards they associate with teaching, they rarely complain (p. 1).

More than 20 years after Gappa’s study, Akroyd and Caison (2005) show that part-time faculty are generally still satisfied with their overall jobs. The 2004 NSOPF provides further evidence of job satisfaction, showing that 92% of both full-time and part-time faculty reported either somewhat or very satisfied with their job (Eagen, 2007). According to Wallin (2004), some part-time faculty are working to earn extra income; some are providing a service to the community; some want to share their skills; and some enjoy the challenge of college-level coursework and working with adults. In other words, they simply like to teach.

Organizational Commitment

This preceding paragraphs have outlined who community college faculty are and how they serve their institutions. The next section details organizational commitment theory as a framework for examining how community college faculty develop organizational commitment.

Organizational commitment has been widely studied for over 40 years by researchers from various disciplines. Due to this time span and range of perspectives, the definition and measurement of organizational commitment has evolved across the decades. The latest burst

of development occurred in the 1990s with the introduction of the multi-dimensional approach to understanding organizational commitment. Since then, the multi-dimensional perspective has influenced research in work commitment as a whole. Some scholars today approach work commitment as an integrated complex of commitment forms.

The following sections will explore this theoretical evolution of organizational commitment. The discussion will begin with Becker's (1960) early conceptualization, followed by Morrow, Porter and Steers' (1982) framework and conclude with Meyer and Allen's (1991) multi-dimensional approach that dominates the literature today.

Becker's Early Conceptualization

One of the earliest conceptualizations of organizational commitment was developed by Becker (1960). In this approach, termed as the "side-bet" or calculative approach (Cohen, 2003), Becker argued that individuals accumulated investments over time and eventually became committed to an organization, especially at the threat of losing these investments.

Becker (1960) wrote:

The man who hesitates to take a new job may be deterred by a complex of side-bets: the financial costs connected with a pension fund he would lose if he moved; the loss of seniority and "connections" in his present firm, which promise quick advance if he stays; the loss of ease in doing his work because of his success in adjusting to the particular conditions of his present job; the loss of ease in domestic living consequent on having to move his household, and so on (pp. 38-39).

As Becker (1960) described above, there are various forms of side-bets. Becker went on to sort these various side-bets into five broad categories and conceded this list is not exhaustive (p. 32-40):

1. generalized cultural expectations (how long should one stay at a job based on the expectations of a reference group),

2. self-presentation concerns (an employee's attempt to preserve his/her public image)
3. impersonal bureaucratic arrangements (policies that encourage long-term employment)
4. individual adjustments to social positions (investment of time and training for organization-specific skills)
5. non-work concerns (establishment of ties to a community)

Measures based on Becker's side-bet approach were first developed by Ritzer and Trice in 1969 and later modified by Alutto, Hrebiniak, and Alonso in 1973 (Cohen, 2003). Results of these studies have provided mixed empirical support for the theory because the measures incorporated proxy variables as measures for side-bets (Powell & Meyer, 2004). The proxy variables included age, tenure, gender, and marital status, with the rationale being that side-bets accumulate with age and tenure. Moreover, they believed the costs associated with leaving an organization would be greater for women and for those that are married.

However, the studies that utilized the proxy variables did not yield the expected results. For example, status and pay may increase with tenure, but so do knowledge and skill. All of these factors (status, pay, knowledge, skill, etc.) can contribute to an employee's canvas of side bets, which consequently made these proxy variables limited in their ability to clearly predict organizational commitment (Powell & Meyer, 2004).

Research has continued on Becker's (1960) side-bet theory. Shore, Tetrick, Shore and Barksdale (2000) developed a 32-item to measure the five broad categories of side-bets developed by Becker. Upon factor analysis of this metric, Shore and associates found that the factors did not completely correspond to Becker's five categories. Three of them (bureaucratic arrangements, individual adjustments to social positions, and non-work concerns) were well-represented, but two of them (generalized cultural expectations and self-

presentation concerns) were not. These results provided only partial support for Becker's side-bet theory (Powell & Meyer, 2004).

Most recently, Powell and Meyer (2004) tested Becker's theory within the context of Meyer and Allen's multi-dimensional model of organizational commitment. Details of this research are discussed later in this document.

Mowday, Porter and Steers' Conceptualization

Evolution of the organizational commitment construct continued as researchers alternatively approached it from attitudinal and behavioral perspectives, rather than from a calculative one as described by Becker. The principal researchers who argued from this attitudinal and behavioral viewpoint were Mowday, Porter and Steers (1982). They distinguished behavioral and attitudinal approaches by the following:

Attitudinal commitment focuses on the process by which people come to think about their relationship with the organization. Behavioral commitment, on the other hand, relates to the process by which individuals become locked into a certain organization and how they deal with this problem (p. 26).

Moreover, they defined organizational commitment as "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Porter, & Steers, 1982, p. 27) and characterized it by three factors:

1. a strong belief in and acceptance of the organization's goals and values;
2. a willingness to exert considerable effort on behalf of the organization; and
3. a strong desire to maintain membership in the organization (p. 27)

Through their espousal of this definition and characterization of organizational commitment, Mowday, Porter, and Steers clearly captured both the attitudinal and behavioral approaches for defining the commitment construct.

From this definition of commitment, the most often used psychometric measure of organizational commitment, known as the Organizational Commitment Questionnaire (OCQ), was introduced (Cohen, 2003). In its original version, the OCQ consisted of 15 items that encompassed the three factors (listed above) of the commitment definition espoused by Mowday and associates (1982).

The OCQ was the dominant measure used by scholars in the 1970s and mid-1980s (Cohen, 2003) and has since been the subject of several meta-analyses (Cohen, 1991, 1992, 1993a; Mathieu & Zajac, 1990). This scrutiny spawned criticism of the original 15-item OCQ. Critics argued the OCQ attempted to quantify commitment behaviors that actually overlapped with other outcome behaviors, such as withdrawal and performance (Cohen, 2003). Mowday and associates (1982) noted that the relationship between OCQ and attitudinal variables, such as job satisfaction and job involvement, was “too high for an acceptable level of discriminant validity” (Cohen, 2003, p. 20).

Additional criticisms populated the literature. Mowday, Porter, and Steers’ conceptualization was described as a *uni-dimensional construct* because the OCQ instrument measures a single common underlying construct (Mowday, Porter, & Steers, 1982). Furthermore, Mayer and Schoorman (1992) argued that this conceptualization did not fully explain *how* an individual becomes committed to an organization.

Response to these criticisms yielded two separate lines of inquiry. First, some researchers have continued to use the OCQ as an abridged 9-item version. This abbreviated version does not include the 6 items that overlap with withdrawal and performance. Several of the most recent reports involving the OCQ have been performed in studies with non-

Western workers, specifically in Japan (Sumi, 2006), Taiwan (Huang, 2006), and Korea (Lee & Gao, 2005). Second, other researchers attempted to define and measure organizational commitment in a newer way.

Meyer and Allen's Three-Factor Conceptualization

Recognizing the limitations of earlier theories of organizational commitment, researchers have worked to develop it further as a more explanatory model (Angle & Perry, 1981; Mayer & Schoorman, 1992; Penley & Gould, 1988). Most notably, Meyer and Allen (1991) synthesized earlier definitions of organizational commitment and organized them into three broad themes that reflect “the affective orientation toward the organization, a recognition of costs associated with leaving the organization, and a moral obligation to remain with the organization” (p. 11).

Hence, Meyer and Allen (1991) re-conceptualized organizational commitment as a multi-dimensional construct consisting of three components: affective, continuance, and normative commitment. Affective commitment refers to the employee’s “emotional attachment to, identification with, and involvement with the organization” (Meyer & Allen, 1997, p. 11). In continuance commitment, an employee chooses to stay with an organization due to an awareness of the costs associated with leaving it. In normative commitment, an individual continues employment due to a sense of obligation. Each of these three components of organizational commitment may be experienced alone or simultaneously and at different levels by all individuals of an organization (Meyer & Allen, 1997).

Conceptually, Meyer and Allen’s three-component model of organizational commitment first emerged as a two-component model (Meyer & Allen, 1984) that paralleled

elements of earlier theories. The continuance component was analogous to Becker's (1960) side-bet calculative approach to organizational commitment; the affective component corresponded to Porter, Steers, Mowday and Boulian's (1974) attitudinal approach. Along with Becker (1960), Porter et al. (1974) and Wiener (1982) conceptualized commitment as a *moral obligation* to the organization that complies with normed behaviors (Powell & Meyer, 2004). Based on Wiener's (1982) research, Meyer and Allen added the third component, normative commitment, to their model in 1990 to reflect this form of commitment (Cohen, 2003).

Meyer and Allen (1984, 1990) developed the Affective Commitment Scale (ACS), the Continuance Commitment Scale (CCS) and the Normative Commitment Scale (NCS) to measure the three components of commitment respectively. In their original forms, each of these scales consisted of 8 items. Confirmatory factor analyses (Dunham, Grube & Castenada, 1994; Hackett, Bycio & Hausdorf, 1994) and a principal components analysis (Gormley, 2005) have established that each of the commitment scales (ACS, CCS, and NCS) measures distinct components of commitment (Meyer et al., 2002). Subsequent research on these scales, which is discussed in the following paragraphs, continued to provide evidence in support of these three measures. Still other research has showed that some revision was necessary.

Affective Commitment Scale

The ACS is used in most contemporary studies on organizational commitment (Cohen, 2003). Citing empirical research by Blau and associates (1993), Cohen (2003) asserts that the ACS is "superior to Porter and associates' (1974) OCQ scale" (p. 23).

Furthermore, Meyer and Allen (1984) found Ritzer and Trice's (1969) measure of Becker's side-bets correlated highly with the ACS (Cohen, 2003; Powell & Meyer, 2004). This was not surprising because the ACS was initially developed to conceptually parallel Becker's theory.

Continuance Commitment Scale

The CCS has been a topic of considerable research. This research has either focused on the comparability of the CCS with earlier measures of continuance commitment or on the factor structure of the CCS. On the issue of comparability, Meyer and Allen (1984) found the CCS to be a "more appropriate measure of side-bet theory than that of Hrebiniak and Alutto (1972) and of Ritzer and Trice (1969)." In later research, Powell and Meyer (2004) found that a subscale of the CCS "more clearly reflects Becker's (1960) side-bet commitment" (p. 171). This subscale was named CC:HiSac and is discussed more fully in the following paragraphs.

On the issue of factor structure, McGee and Ford's (1987) factor analysis showed that the CCS actually consisted of 2 distinguishable dimensions: 1) perceived sacrifices associated with leaving (CC:HiSac) and 2) lack of job alternatives (CC:LoAlt). Subsequent confirmatory factor analyses (Hackett, Bycio, & Hausdorf, 1994; Somers, 1993) have generally supported this finding.

In light of this evidence, Powell and Meyer (2004) developed a six-item, CC:HiSac subscale of the CCS in order to more reliably measure this distinct dimension of continuance commitment. They then tested the CC:HiSac for dimensionality, reliability, and construct validity. Analysis showed evidence that the original CCS indeed consisted of two distinct

factors, the CC:HiSac and CC:LoAlt. Further analysis showed that the newly-developed, 6 item CC:HiSac had a high internal consistency ($\alpha = 0.81$). Therefore, it was recommended that this measure “be used in subsequent research concerning the three-component model” (Powell & Meyer, 2004, p. 171).

Normative Commitment Scale

Several studies have shown stronger than expected correlations between the ACS and NCS. Moreover, the correlation patterns for antecedent and outcome measures are stronger for the ACS than the NCS (Meyer and Allen, 1997). Hence, it has been suggested that an employee’s affective attachment to an organization is not independent of her/his sense of obligation to stay at that organization (Hackett et al., 1994). In other words, there is a natural link between affective and normative commitment. The original 1991 NCS was revised in 1993 in order to accommodate this theory and disentangle the affective and normative commitment overlap.

The NCS was initially developed as an 8-item scale based on Wiener’s (1982) conceptualization of commitment that “emphasizes the internalization of social values (e.g., ‘I was taught to believe in the value of remaining loyal to one organization’)” (Meyer et al., 2002, p. 40). The 8-item NCS was revised in 1993 to a 6-item version that “focuses more directly on the sense of obligation...(e.g. ‘Even if it were to my advantage, I do not feel it would be right to leave my organization now’)” (Meyer et al., 2002, p. 40).

Some studies have shown that this modification to the NCS did indeed correct the high correlations between the ACS and the NCS, while other studies have shown that it did not (Meyer and Allen, 1997). Clearly, more research is needed.

Organizational Commitment among Postsecondary Faculty

The literature concerning organizational commitment and postsecondary faculty has been dominated by two conceptual frameworks of organizational commitment. These frameworks are Mowday, Porter and Steers' (1982) conceptualization and Meyer and Allen's (1991) multi-dimensional framework. It is evident from the literature that both frameworks are nearly equally represented in the studies and dissertations published in the late 20th and early 21st century.

Organizational Commitment among Faculty at Four-Year Institutions

Only about 100 studies in the last 25 years have specifically addressed organizational commitment among faculty working at four-year institutions. A selected review of the more recent studies is outlined and presented by date of publication in the following paragraphs.

Borchers and Teahen (2001) examined organizational commitment as conceptualized by Mowday, Porter, and Steers for full-time and part-time faculty at two educational institutions in the Midwest. Results of this study also showed that overall commitment levels were not different among faculty based on employment status. The antecedent variables of age, tenure, and gender were not significant predictors of organizational commitment, while education level was a significant positive predictor.

Outside the Western world, al-Kahtani (2004) examined organizational commitment as conceptualized by Meyer and Allen (1991) for faculty in the Institute of Public Administration in the Kingdom of Saudi Arabia. Results of his regression models showed that gender, education and job type were significant indicators of affective and normative

commitment, while age, gender, education, occupational level and job type were significant predictors of continuance commitment.

In that same year, Huang (2004) also examined commitment as conceptualized by Meyer and Allen (1991) for faculty in Taiwan's higher education institutions. He found that males had statistically significant higher affective and normative commitment scores than females, but no gender differences existed for continuance commitment. Furthermore, he found significant differences in continuance commitment scores based on length of employment and academic rank, yet no differences were found for affective and normative commitment. Lastly, he found no significant differences in commitment scores based on age or marital status.

Back in the United States, Taylor (2005) measured organizational commitment using Mowday, Porter, and Steers' 15-item OCQ with faculty working in colleges affiliated with the Council for Christian Colleges and Universities. He reported significantly higher levels of organizational commitment for faculty who were female, over 60 years of age, and working at their alma mater.

In that same year, Gormley (2005) examined organizational commitment as conceptualized by Meyer and Allen (1991) for full-time, tenure track, doctorally-prepared nurse faculty at Doctoral/Research Universities. She reported that role ambiguity and role conflict can lead to a decrease in organizational commitment for these faculty.

Coberly (2005) examined organizational commitment as conceptualized by Meyer and Allen (1991) for faculty industry-university research centers. Her path analysis model showed that both intrinsic and extrinsic rewards were significant predictors of satisfaction

and that satisfaction was a significant predictor of commitment. Moreover, path analysis showed that intrinsic rewards had a direct effect on commitment.

Carlson (2005) also examined the influence of rewards on organizational commitment, but utilized the Mowday, Porter, and Steers 15-item OCQ in her study of adjunct faculty teaching at four-year Christian colleges. She found that organizational commitment levels would increase if the adjunct faculty member was assigned a mentor and given a title other than 'adjunct.'

Carver (2005) measured organizational commitment as conceptualized by Meyer and Allen (1991) for a national sample of nursing faculty. Results of a one-way between-groups analysis of variance demonstrated that significant differences in levels of organizational commitment existed between generations of nursing faculty. Specifically, the study showed Generation X (people born between 1961 and 1981) faculty had the lowest mean scores of organizational commitment when compared to faculty belonging to the Veteran (people born between 1925 and 1942) or Baby Boom (people born between 1943 and 1960) generations.

Thomas (2008) examined faculty, staff and administrator perceptions of organizational climate and commitment at four Christian institutions of higher education. Organizational climate was measured using the Personal Assessment of College Environment (PACE; NILIE, 2005) instrument; organizational commitment was measured using Meyer and Allen's (1991) three-component instrument. Thomas reported that administrator and faculty perceptions of climate were not related to their commitment.

Murphy (2009) examined levels of organizational commitment, using years of institutional service as a single-item proxy for institutional commitment, for faculty at four-

year institutions. She reported full-time tenured/tenure track faculty have more years of service, and thereby higher organizational commitment, than part-time (contingent) faculty.

Organizational Commitment among Community College Faculty

Analysis of the 2004 NSOPF data showed that just 11% of adjunct faculty hold multiple part-time teaching positions in order to amass an annual salary (Eagen, 2007). Interestingly, 72% are employed in non-teaching positions outside their adjunct faculty role (Eagen, 2007). Wallin (2004) cites Rifkin's work published in 2000 when she states that "because [part-timers] are usually employed elsewhere, they may not have the commitment to the college that is more typical of full-time faculty" (p. 380).

At the same time that Wallin makes her assessment of the commitment level of part-time faculty using data cited above, an opposite perspective may be drawn from other evidence. Data from the 2004 NSOPF show that the average number of years part-time faculty are employed at a single institution is 7.0 years, representing a more than 1.5 year increase from the 5.3 year average reported in the 1999 NSOPF (Eagen, 2007). Average length of employment results from both the 1999 and 2004 NSOPF datasets suggest that part-time faculty are indeed committed to the institution.

As demonstrated, there are at least two divergent perspectives about commitment among part-time faculty that exist in the literature. One perspective is that part-time faculty are not as committed to their organizations as their full-time counterparts; the other is that they are just as committed as the full-timers. Clearly, more research is needed to clarify the level of organizational commitment for both part-time and full-time community college faculty.

Only seven studies in the last 25 years were discovered that specifically address organizational commitment among community college faculty. A review of these is presented by date of publication in the following paragraphs.

Stengel (1983) examined full-time community college faculty commitment to the organization's goals and found that gender, organizational involvement, and leader behavior were positively significant factors in organizational commitment while age, education, tenure were not significant.

A meeting paper by Hill (1984) showed that self-role congruence was a positively significant predictor of organizational commitment for remedial/developmental education community college instructors in a New York institution.

A study by Fjortoft (1993) examined institutional and departmental commitment as conceptualized by Mowday, Porter, and Steers. The sample included faculty employed either full-time or part-time at both four-year and two-year institutions. Fjortoft found that rank was not a significant predictor of commitment to the institution, while satisfaction with salary and working conditions were not significant predictors of commitment to the department. No direct comparisons of these variables were made for faculty based on institution type or employment status.

Incorporating Mottaz's conceptualization of the construct, Speier-Bowman (1995) compared organizational commitment levels in her model of work satisfaction among full-time and part-time community college faculty at four institutions in Denver. Results of this study showed that overall commitment levels were not different among faculty based on

employment status and that commitment, along with work involvement, was a significant predictor of work satisfaction.

Valadez and Antony (2001) examined commitment among part-time faculty at two-year and four-year institutions using the 1992-93 National Study of Postsecondary Faculty data, but without utilizing a well-established theoretical framework for organizational commitment. They report 87.9% of part-time faculty at two-year institutions strongly or somewhat strongly agreed to the statement “If I Had to Do It All Over Again, I Would Still Choose an Academic Career”. This percentage is nearly equivalent to the number of part-time faculty at four-year institutions who strongly or somewhat strongly agreed to the statement. According to the authors, these data suggest part-time faculty are committed to their careers in academia.

Kaiser (2005) measured organizational commitment as conceptualized by Meyer and Allen (1991) for four generations of community college employees at a single institution in Michigan. She analyzed mean scores for each individual commitment scale item and found significant differences among the four age groups for several of these items. Generally, Kaiser found a higher commitment level for Boomer (people born between 1943 and 1960) and Thirteenth (people born between 1961 and 1981) generations than for Mature (people born between 1925 and 1942) and Millennial (people born between 1982 and the present) generations.

Messer (2006), in her study of faculty at Tulsa Community College, looked at four predictors of resistance to change. She found that neither organizational support nor affective commitment had a significant influence on change resistance.

Upon review of the literature, no known studies have purposely modeled organizational commitment for community college faculty as a function of their full-time or part-time employment status using Meyer and Allen's conceptualization of organizational commitment.

Significant Indicators of Organizational Commitment

The literature has shown that organizational commitment may be influenced by a variety of antecedents, or factors. In a meta-analysis of 155 international publication articles, dissertations, and unpublished manuscripts and meeting presentations, Meyer and associates (2002) studied the correlations of several antecedent variables with all three components of commitment. They found that demographic variables (age, tenure, organization tenure) correlated positively with all three commitment components; that work experience variables (role ambiguity, role conflict) were more strongly and negatively correlated to affective commitment; that both organizational support and procedural justice were highly correlated to affective commitment and, to a lesser extent, normative commitment; that the availability of job alternatives variables (transferability of education, transferability of skills) were more strongly and negatively correlated to continuance commitment.

Most studies utilizing Meyer and Allen's framework have been conducted in organizations outside of higher education. Only about 100 studies in the last 25 years have specifically addressed organizational commitment among post-secondary faculty.

The results of these studies have demonstrated that antecedent variables such as role ambiguity and role conflict (Gormley, 2005), organizational support (Carver, 2005; Messer, 2006), gender (Taylor, 2005; Ching, 2004; al-Kahtani, 2004; Huang, 2004), age (al-Kahtani,

2004; Carver, 2005; Taylor, 2005; Thomas, 2008), mentor assignment (Carlson, 2005), servant leadership (Drury, 2004), intrinsic rewards (Carlson, 2005; Coberly, 2005), extrinsic rewards (Coberly, 2005), length of employment (Flynn, 2000; Huang, 2004; Thomas, 2008), education level (Borchers & Teahen, 2001; al-Kahtani, 2004), academic rank (Huang, 2004; Simcox-Myers, 2003) are significant correlates to the various components of, or to overall, organizational commitment for higher education faculty.

Introduction of Variables

The literature has shown that organizational commitment may be influenced by a variety of antecedent variables. The research has also provided evidence for a number of these variables to be significant predictors of organizational commitment. The most salient of these are included in the current study and are described below.

Organizational Variables

Organizational Support

Definition. Developed by Eisenberger, Huntington, Hutchison and Sowa (1986), the perceived organizational support (POS) construct is defined as an employee's "global beliefs about the extent to which [their] organization cares about their well-being and to which it values their contributions" (Fuller et al., 2006, p. 328). As such, the POS construct provides a framework for understanding how employees become affectively committed to their organizations (Hutchison, 1997).

This process of commitment development, as described by Eisenberger and associates (1986), was grounded in the social exchange approach. This approach is based on two ideas. The first is Levinson's (1965) view that employees personify, or anthropomorphize, their

organization based on the actions, traditions, and policies taken by the organization (Hutchison, 1997; Fuller et al., 2006). Employees interpret organizational actions – such as praise, participation in decision-making, or promotions – as evidence of support (Shore & Shore, 1995).

The second idea underlying this approach is that work itself is a form of social exchange whereby an employee's effort and loyalty are traded for material and social rewards offered by the organization (Hutchison, 1997). In response to supportive actions by an organization, the employee may feel obligated to repay the organization by working harder in support of the organization's goals (Eisenberger, et al. 1986; Wayne, Shore, and Liden, 1997). This behavior becomes reciprocal, as the organization will provide more support when the employee completes work in fulfillment of organizational goals (Shore & Shore, 1995).

Contribution to commitment. The combination of these two ideas into a single social exchange framework led Eisenberger and associates to develop the Survey of Perceived Organization Support (SPOS). Several studies incorporating this metric have demonstrated its utility in predicting organizational commitment. In their meta-analysis of 155 publications, Meyer and colleagues (2002) showed that organizational support strongly and positively correlated with affective and normative commitment, yet it had a negative correlation to continuance commitment.

Hutchison's (1997) study, utilizing the SPOS, provided results that were consistent with the social exchange model of perceived organization support and commitment. In this study, surveys were administered to both faculty and staff in a large university. Path analysis

of data showed these employees' perception of organization support had a direct effect on their commitment to the organization. Carver's (2008) study of nursing faculty showed significantly positive correlations between organizational support and affective and normative commitment. Messer (2006) also reported a significant positive correlation between organizational support and affective commitment in her study of Tulsa Community College faculty. The role of supportiveness is also observed in studies involving organization leaders (Meyer & Allen, 1997). For example, supportive *leader behavior* (Turan, 1998) toward faculty has been shown to be a significant positive correlation to organizational commitment.

Altogether, these results suggest that organizational support might be an important variable in predicting organizational commitment for faculty in North Carolina community colleges.

Role Conflict and Role Ambiguity

Definition. Before a discussion of role conflict or role ambiguity can begin, the term "role" must first be defined. According to Rizzo and colleagues (1970), a role is typically referred as a "set of expectations about behavior for a position in a social structure" (p. 155). In the current study, the 'position' is the faculty assignment and the 'social structure' is the community college organization. 'Expectations' are those that are established by someone who is familiar with the role in question. Expectations of faculty member behavior serve as both requirements and delimiters of that role (Rizzo et al., 1970). In other words, expectations serve as standards of appropriate behavior. They can also condition this behavior in a faculty member.

Role conflict involves contradictory demands from two or more roles at the same time. An example of role conflict may occur when a faculty member is asked to serve on several time-consuming committees at the same time the faculty member is asked to teach another section of a course. The demands of these requests are incompatible with one another and result in conflict.

Role ambiguity, before 1970, was not well-defined in the literature. Since that time, the definition espoused by Rizzo and colleagues (1970) is the one most commonly used in studies today. Role ambiguity is defined as “the predictability of the outcome or responses to one’s behavior” and “the existence/clarity of behavioral requirements, often in terms of inputs from the environment, which would serve to guide behavior and provide knowledge that the behavior is appropriate” (p. 156). An example of role ambiguity may occur when faculty members are not clear about the responsibilities of their jobs and are uncertain about the expectations required for being a successful instructor and employee at the college.

Contribution to commitment. Meyer and colleagues (2002) in their meta-analysis showed that role conflict and role ambiguity most strongly and negatively correlated with affective commitment. Gormley (2005) showed both of these variables to be negative correlates of all three commitment components for full-time, tenure track nurse faculty at doctoral/research - extensive institutions. Altogether, these results suggest that role conflict and role ambiguity may be important variables in predicting organizational commitment for faculty in North Carolina community colleges.

Procedural Justice

Definition. Procedural justice “concerns the perception an employee holds of the fairness of the processes used by an organization” (Hopkins & Weathington, 2006).

According to Brockner and Wiesenfeld (1996), when an unfavorable outcome is matched with the perception of an unfair decision, employees are likely to feel resentment toward the organization and those who made the decision.

One of the items often cited as a least favorable aspect of the employee’s job at a specific community college is the lack of opportunity for professional advancement/promotion (L. Haight, personal communication, 2007). The processes and procedures for advancement/promotion are unique to every organization, notwithstanding staunch adherence to federal laws governing these processes, of course. Given the uniqueness of these procedures among institutions, employees who perceive a lack of opportunity for advancement might also perceive it as a procedural *injustice*. The literature refers to this in the affirmative, as procedural justice.

Contribution to commitment. In their study of employees working at a large transportation facility in eastern USA, Hopkins and Weathington (2006) found a direct relationship between procedural justice and affective commitment. However, they found *no* relationship to continuance commitment. Meyer and colleagues (2002) in their meta-analysis showed that procedural justice moderately and positively correlated with affective and normative commitment; and it negatively correlated to continuance commitment.

No known studies have investigated this variable specifically for faculty in higher education institutions. Therefore, procedural justice might be an important variable in predicting organizational commitment for faculty in North Carolina community colleges.

Job Alternatives/Transferability Variables

Availability of Job Alternatives

Definition. The definition for this category is the availability of a comparable job in another organization. This variable does not account for movement to another job within the same organization.

Contribution to commitment. In their meta-analysis, Meyer and colleagues (2002) showed that the availability of job alternatives most strongly and negatively correlated with continuance commitment. No known studies have investigated this variable specifically for faculty. Therefore, the availability of job alternatives might be an important variable in predicting organizational commitment for faculty in North Carolina community colleges.

Transferability

Definition. The construct of transferability in this study specifically includes two factors – education and skills. Transferability is the extent to which employees believe that their formal education and their organization-based skills could be transferred to another organization (Allen & Meyer, 1990).

Contribution to commitment. In their meta-analysis, Meyer and colleagues (2002) showed that both transferability of education and transferability of skills strongly and negatively correlated with continuance commitment. No known studies have investigated these variables specifically for faculty. Therefore, the transferability of education and

transferability of skills variables might be important in predicting organizational commitment for faculty in North Carolina community colleges.

Reward Variables

Intrinsic and Extrinsic Rewards

Definition. Mottaz (1988) discusses three dimensions of rewards: task, social, and organizational. Task rewards are considered intrinsic rewards in that they originate from an internal source. They are also directly associated with the employee's job. The community college faculty member, for example, is the internal source and the intrinsic reward is the value the faculty member places on teaching. Extrinsic rewards are rewards that originate from a source external to the person, in this case from the community college environment. Both social and organizational rewards are considered extrinsic rewards. Social rewards are derived from interacting with other humans while at the workplace. For example, the social extrinsic reward for the faculty member is the degree to which colleagues assist him/her at the job. Organizational rewards are those that the organization provides to its employees in order to facilitate or motivate task performance.

Contribution to commitment. Mottaz (1988) examined the relationship between intrinsic and extrinsic work rewards, work values, and organizational commitment. In this study, work values were measured as a rating of the relative importance of each of the work rewards. Organizational commitment was defined by the Mowday, Porter and Steers (1982) conceptualization. Data were collected in six different organizations and across five occupational groups within those organizations. Multiple regression analysis showed that work rewards had a stronger relationship to organizational commitment than work values.

Intrinsic rewards had the strongest relationship with organizational commitment, followed by extrinsic social rewards. Extrinsic organizational rewards had the smallest influence on organizational commitment.

Coberly (2004) examined the effect that work rewards had on organizational commitment among faculty associated with industry-university research centers. For this effort, she created a scale to measure both intrinsic and extrinsic rewards. Her results showed that intrinsic rewards had a direct effect on organizational commitment among these faculty.

Carlson (2005) also examined the influence of rewards on organizational commitment in her study of adjunct faculty teaching at four-year Christian colleges. She found that organizational commitment levels would increase if the adjunct faculty member was assigned a mentor and given a title other than 'adjunct'. Taken together, these studies suggest that intrinsic and extrinsic rewards might be important in predicting organizational commitment for North Carolina community college faculty.

Demographic Variables

Age

The meta-analysis (Meyer et al., 2002) showed that age correlated positively with all three commitment components. Results from the studies focusing on age of faculty showed similar results. Carver (2005) demonstrated that significant differences in levels of organizational commitment existed between generations of nursing faculty. Specifically, the study showed Generation X (people born between 1961 and 1981) faculty had the lowest mean scores of organizational commitment when compared to faculty belonging to the

Veteran (people born between 1925 and 1942) or Baby Boom (people born between 1943 and 1960) generations. Kaiser (2005) found higher commitment levels for Boomer (people born between 1943 and 1960) and Thirteenth (people born between 1961 and 1981) generations than for Mature (people born between 1925 and 1942) and Millennial (people born between 1982 and the present) generations. Altogether, these results suggest that age *is* an important variable in studies of faculty in North Carolina community colleges.

Education Level

The meta-analysis (Meyer et al., 2002) showed that education level correlated weakly with affective and normative commitment. Moreover, the analysis showed that educational level was negatively, albeit weakly, correlated with continuance commitment. Teahen (2000) also found a negative correlation between education level and organizational commitment in her study of full-time and part-time faculty at two Midwestern educational institutions. For these reasons, educational level may be an important variable in studies of faculty in North Carolina community colleges.

Organizational Tenure

The meta-analysis (Meyer et al., 2002) showed that organizational tenure correlated positively with all three commitment components. Results from the studies focusing on these variables for faculty (al-Kahtani, 2004; Teahen, 2000; Poppens, 2000) showed mixed results. One of these studies (Poppens, 2000) show that these variables are positively correlated to organizational commitment, while the other two studies (al-Kahtani, 2004; Teahen, 2000) suggest that there is no correlation. For these reasons, organizational tenure may be an important variable in studies of faculty in North Carolina community colleges.

Institutional Size

No known studies involving organizational commitment have incorporated the size of the academic institution as a demographic variable. Studies outside academia do indeed suggest a relationship. For example, Sommer and colleagues (1996) showed that organizational commitment among employees working at Korean firms decreased as the organizational size increased. A similar relationship was found in a study of Australian private sector employees (Zeffane, 1994). For these reasons, institutional size may be an important variable in organizational commitment studies among faculty in North Carolina community colleges.

Summary

Organizational dependence on part-time employees is a relatively recent trend across the modern landscape of the American workforce and is especially apparent in higher education. At community colleges across the country, as well as in North Carolina, there is a substantial reliance on part-time faculty employment. This is common practice in order to reduce institutional costs and to maintain institutional flexibility in curricular offerings. As community colleges' dependence on part-time faculty continues, it becomes apparent that these employees are critical to the success of these institutions.

Part-time faculty teach the same courses and content as their full-time counterparts. Similarities between full-time and part-time faculty continue in terms of gender, race and age. From this perspective, part-time faculty are highly skilled and trained assets to their colleges. They are specialized labor (Levin, 2007). Differences between the faculty groups became apparent with regard to educational attainment, the number of credit hours they teach

and salary. From this perspective, part-time faculty are a less-skilled group that are a means to economic efficiency (Wagoner, 2007). They are contract labor (Levin, 2007). This contradiction in perspectives demonstrates the marginalization of part-time faculty.

In light of this paradox and despite the widespread employment of part-time faculty, there is little known about the commitment levels of these faculty, or even the levels of their full-time counterparts. Few studies in the literature have addressed the organizational commitment of higher education faculty in general and even fewer have addressed it for faculty working in the nation's community colleges.

Examination of the levels of organizational commitment and of how community college faculty develop organizational commitment is framed by organizational commitment theory. Evolution of organizational commitment theory was sparked with Becker's early conceptualization based on a calculative, side-bet approach. These thoughts led to Morrow, Porter and Steers' framework that embraced both attitudinal and behavioral approaches. This conceptualization, along with the OCQ scale, dominated the literature through the mid-1980s. Extending the work of these scholars, Meyer and Allen developed a multi-dimensional approach consisting of affective, continuance normative components.

The continuance component was analogous to Becker's (1960) side-bet calculative approach to organizational commitment; the affective component corresponded to Porter and colleagues (1974) attitudinal approach. Based on Wiener's (1982) research, Meyer and Allen added the third component, normative commitment, to their model in 1990 to reflect this form of commitment (Cohen, 2003).

To measure each of these commitment components, Meyer and Allen (1990) developed scales that originally consisted of 8 items. Each of these scales has since been revised to include just 6 items (Meyer, Allen & Smith, 1993).

These scales, and ultimately Meyer and Allen's conceptualization, "ha[ve] been subjected to the greatest empirical scrutiny and ha[ve] arguably received the greatest support (Meyer, Becker & Vandenberghe, 2004, p. 993). In other words, they have become *the* widely-accepted theoretical framework and metric in current organizational commitment research.

The literature has shown that organizational commitment may be influenced by a variety of antecedent variables. The research has also provided evidence for a number of these variables to be significant predictors of organizational commitment. The most salient of these – organizational, job alternatives/transferability, rewards and demographic variables – are included in the current study.

CHAPTER THREE: METHOD

Research Design

The purpose of this study was to examine how North Carolina community college full-time faculty compare to part-time faculty in their level of organizational commitment. Additionally, the purpose of this study is to investigate the predictive value of demographic, organizational, job alternatives/transferability, and reward variables on organizational commitment for these faculty. As such, this study was a cross-sectional examination of faculty in their work setting and employed an explanatory non-experimental research design (Johnson, 2001). It utilized quantitative survey methods with appropriate sampling procedures in order for the researcher to make inferences about all full-time and part-time community college faculty in North Carolina by using a smaller, representative sample of this entire population.

Instrumentation

Several survey scales that have been previously established in the literature were utilized in this study. The following paragraphs introduce each of the scales and provide evidence of their validity and reliability.

Likewise, there are several scales utilized in this study that previously have not been analyzed for validity and reliability. The following paragraphs will describe this where applicable.

Organizational Support

Organizational support was measured using the Survey of Perceived Organizational Support (SPOS) developed by Eisenberger, Huntngton, Hutchison, and Sowa (1986). Originally a single-construct, 17-item questionnaire, the SPOS was designed to measure the employee's perception of employer commitment. It was later abridged to include 8 items that utilize a 7-point, Likert-type scale (where 1 = Strongly disagree and 7 = Strongly agree). Four of the items are negatively worded. The abridged version has been recommended by Rhoades and Eisenberger (2002) such that "the use of shorter versions does not appear to be problematic" (p. 699). The abridged SPOS has been shown in recent studies of higher education faculty to be a correlate to organizational commitment (Carver, 2008; Messer, 2006).

Validity and Reliability

Eisenberger, Fasolo and Davis-LaMastro (1990) conducted the initial factor analysis of the SPOS. Results showed the instrument measured a single factor that accounted for 48% of the variance associated with the construct, with a Cronbach's alpha of 0.97. Andrews and Kacmar (2001) found the SPOS to have an internal reliability of 0.93.

Confirmatory factor analysis (Shore & Tetrick, 1991) has shown the SPOS to be distinguishable from Meyer and Allen's Affective Commitment Scale and from the Organizational Commitment Questionnaire (OCQ) developed by Mowday, Porter, and Steers (1982).

Results from the Rhoades and Eisenberger (2002) meta-analysis of 73 independent studies indicated that SPOS had an acceptable internal reliability, with a range of alpha coefficients from 0.67 to 0.98.

Role ambiguity and Role Conflict

Role ambiguity and role conflict were measured using the Role Ambiguity and Role Conflict Questionnaire developed by Rizzo, House, and Lirtzman (1970). This is a 2-construct (role ambiguity, role conflict), 14-item, self-report questionnaire that utilizes a 7-point, Likert-type scale (where 1 = Very false and 7 = Very true) and measures employee perceptions of their jobs, work roles, and organizational features. Six items are dedicated to the measurement of role ambiguity, while eight items are dedicated to the measurement of role conflict. Gormley (2005) utilized the Role Ambiguity and Role Conflict Questionnaire in her national study of doctorally-prepared nursing faculty working in higher education settings.

Validity and Reliability

Rizzo, House, and Lirtzmann (1970) conducted the initial factor analysis of this Questionnaire. Factor analysis revealed two factors which accounted for 56% of the variance associated with the construct. Factor I was named role conflict and Factor II was named role ambiguity. Analysis further revealed each of the constructs to be independent from one another. Gormley (2005) conducted a principle components analysis for the Role Ambiguity and Role Conflict Questionnaire based on the responses of 316 nursing faculty. The results of her analysis yielded a two factor solution which accounted for 100 percent of the variance

found in role ambiguity and role conflict. These results were consistent with past findings by Rizzo, House and Lirtzmann (1970).

Estimates of internal reliability were reported to be between 0.78 and 0.81 for role ambiguity and 0.82 for role conflict (Rizzo, House & Lirtzmann, 1970). Schwab and Iwanicki (1983) reported Cronbach's reliability coefficients of 0.85 for Role Conflict and 0.86 for Role Ambiguity when used with teachers. Gormley (2005) reported alpha coefficients of 0.88 and 0.83 for Role Ambiguity and Role Conflict, respectively,

Procedural Justice

Procedural justice was measured using Moorman's Procedural Justice Scale (1991). This is a 7-item, self-report questionnaire that utilizes a 7-point, Likert-type scale (where 1 = Very false and 7 = Very true) and measures employee perceptions of fairness in their organization's decision-making processes.

Validity and Reliability

Moorman (1991) conducted the initial confirmatory factor analysis of this questionnaire. Confirmatory factor analysis revealed that all items significantly loaded on the latent construct of procedural justice.

Individual estimates of internal reliability for each item within the procedural justice scale were reported to be between 0.67 and 0.90 (Moorman, 1991). Hopkins and Weathington (2006) reported an internal reliability of 0.94 for their sample.

Availability of Job Alternatives

Perceived availability of job alternatives was measured using a single-factor, 4-item instrument. The items in this measure were developed from the definition of this category - the availability of a comparable job in another organization (Powell & Meyer, 2004).

Validity and Reliability

Evidence for the validity of this scale, by way of either confirmatory or exploratory factor analysis, cannot be found in the literature. Powell and Meyer (2004) report a range of internal reliabilities, from $\alpha = 0.54$ to $\alpha = 0.86$, for each of the measures in their study of organizational commitment. However, an internal reliability estimate specifically for the availability of job alternatives scale was not reported.

Therefore, an exploratory factor analysis (EFA) was conducted within the current study to provide evidence of construct validity and estimates of internal reliability. EFA is a common procedure for construct validation which is used to identify the factors latent in constructs. Results of this analysis can be found later in this document.

Transferability

Allen and Meyer (1990) used single-item measures to assess the extent to which survey respondents had invested in their organizations. Two of these single-item measures were identified as 1) transferability of skills and 2) transferability of education. For the current study, the construct of transferability included these two factors. Since the factors were initially single-item measures, both were expanded to three-item scales. Therefore, the transferability of skills factor was measured as a mean sum score of three items. Likewise, the transferability of education factor was measured as a mean sum score of three items.

Validity and Reliability

Because the questions related to transferability were originally single-item measures, there is limited psychometric information that exists in the literature. Therefore, an exploratory factor analysis (EFA) was conducted within the current study to provide evidence of construct validity and estimates of internal reliability. EFA is a common procedure for construct validation which is used to identify the factors latent in constructs. In this study, it was used to evaluate whether and how well the transferability of skills and the transferability of education factors represent the construct of transferability. Results of this analysis can be found later in this document.

Rewards

Coberly (2004) examined the effect that work rewards had on organizational commitment among faculty associated with industry-university research centers. For this effort, she created a scale to measure both intrinsic and extrinsic rewards. This is a two-construct (internal and external rewards), eight-item, self-report questionnaire that utilizes a five-point, Likert-type scale (where 1 = No impact and 5 = High impact). Four items are dedicated to the measurement of intrinsic rewards, while four items are dedicated to the measurement external rewards.

For the current study, only Coberly's response scale for intrinsic rewards was utilized (her extrinsic rewards scale was particularly suited for industry-university faculty and not appropriate for community college faculty). Her intrinsic rewards scale was expanded from a five-point to a seven-point, Likert-type scale because all other measures included in the current study utilized a seven-point response scale. Coberly's items were also adapted for

the current study to reflect the community college faculty context (instead of the industry-university cooperative research center faculty context in Coberly's study).

Mottaz (1985) examined the effect that work rewards had on job satisfaction among employees associated with several occupational groups. For this effort, he created a scale to measure extrinsic social and organizational rewards. This is a two-construct (social and organizational rewards), self-report questionnaire that utilizes a four-point, Likert-type scale.

For the current study, Mottaz' (1985) scales for extrinsic social and organizational rewards were utilized. Both scales were expanded from a four-point to a seven-point, Likert-type scale because all other measures included in the current study utilized a seven-point response scale. Mottaz' items were also adapted for the current study to reflect the community college faculty context.

Validity and Reliability

Coberly (2004) utilized confirmatory factor analysis (CFA) to assess the number of factors and the loadings of the rewards variables. Model fit measures, normed fit index and the comparative fit index values, obtained from the CFA were reported to be above .9 (NFI=.93, CFI=.96). Also, the Root Mean Square Error of Approximation (RMSEA) was within the acceptable range for adequate fit (below .08) (RMSEA=.078). Altogether, these values were considered acceptable to determine the data had an appropriate level of fit to the two-factor – intrinsic and extrinsic – reward model. Coberly (2004) calculated reliabilities for the rewards factors and reported alpha coefficients of 0.87 and 0.76 for intrinsic rewards and extrinsic rewards, respectively. Mottaz (1985) calculated reliabilities for individual scales

within the extrinsic social and extrinsic organizational rewards factors, but he did not report alpha coefficients for the factors themselves.

Because the questions related to rewards in this study were adapted from two original sources (Coberly, 2004; Mottaz, 1985), there is limited psychometric information that exists in the literature for these scales aggregated together in one study. Therefore, an exploratory factor analysis (EFA) was conducted within the current study to provide evidence of construct validity and estimates of internal reliability. EFA is a common procedure for construct validation which is used to identify the factors latent in constructs. In this study, it was used to evaluate whether and how well the intrinsic, extrinsic organizational and extrinsic social factors represent the construct of rewards. Results of this analysis can be found later in this document.

Organizational Commitment

Meyer and Allen (1984) developed the Affective, Continuance, and Normative Commitment Scales (ACS, CCS, and NCS, respectively) to measure this multi-dimensional construct. Originally eight-item scales, each scale was revised in 1993 (Meyer et al.) to comprise a 6-item, self-report questionnaire utilizing a seven-point, Likert-type scale (where 1 = Strongly disagree and 7 = Strongly agree). A mean sum of the score for each scale will provide the level of employee commitment in the organization.

Validity and Reliability

Confirmatory factor analyses (Dunham, Grube and Castenada, 1994; Hackett, Bycio and Hausdorf, 1994) have established that each of the commitment scales (ACS, CCS, and NCS) measures distinct components of commitment (Meyer et al., 2002). More recently,

Gormley (2005) conducted a principal components analysis for Meyer and Allen's Multidimensional Organizational Commitment Questionnaire based on the responses of 316 nursing faculty. The results of her analysis were a three factor solution, accounting for 100% of the total variance among the commitment items. Gormley's (2005) study provides additional evidence of validity for each of the commitment scales.

For the Affective Commitment Scale (ACS), Allen and Meyer (1990) found alpha coefficients were between 0.83 and 0.85. Clugston (2000) reported a reliability estimate of 0.85 for the ACS. Coleman, Irving, and Cooper (1999) and Randall and associates (1999) reported a coefficient alpha of 0.84 for the ACS. Gormley (2005) reported a reliability estimate of 0.87 for the ACS.

For the Continuance Commitment Scale (CCS), Allen and Meyer's (1996) meta-analysis found reliability estimates were between 0.69 and 0.85. Coleman, Irving, and Cooper (1999) reported a coefficient alpha of 0.82 for the CCS. Randall and associates (1999) reported a coefficient alpha of 0.70 for the CCS. Gormley (2005) reported a reliability estimate of 0.77 for the CCS.

For the Normative Commitment Scale (NCS), Clugston (2000) reported a reliability estimate of 0.80. Allen and Meyer (1996) reported reliability estimates between 0.52 and 0.83. Gormley (2005) reported a reliability estimate of 0.45 for the NCS.

Demographic Data

Demographic data were collected utilizing a researcher-developed survey. Faculty demographic data consisted of the following: age (in years), highest education degree attained, employment status (full-time or part-time), and length of time employed at the

college (in years). Organizational data included the size of the college based on the number of unduplicated student headcount.

The operationalization of the study's independent and dependent variables is presented in Appendix C.

Population Sample

The sample was drawn from the 58 community colleges across North Carolina that employ approximately 6,244 full-time faculty (North Carolina Community College System, 2007) and 14,375 part-time faculty (North Carolina Community College System, 2006).

The sample was developed through a stratified simple random selection design. In this design, all 58 North Carolina community colleges were stratified according to the National Center for Education Statistics (NCES) size classification of two-year postsecondary institutions. Size classification is based on the unduplicated headcount enrollment. An institution classified as small by the NCES enrolls fewer than 2,000 students, an institution classified as medium enrolls between 2,000 and 9,999 students, and an institution classified as large enrolls at least 10,000 students (Goan & Cunningham, 2007).

Data Collection

A web-based survey approach was used to collect data for all variables. The webpage software package Dreamweaver® and its survey compliment Inform®, was utilized for survey development and collection of data.

The 58 North Carolina community colleges were stratified according to their enrollment category – small, medium, and large. Then, each college was assigned a number. For example, college A was assigned to number one, college B was assigned to number two,

college C was assigned to number three, etc. After number assignment to every college, an online random number generator was used to produce random numbers. As the online random number generator produced a number that corresponded to the college that assigned the same number, then the college was selected for invitation to participate in the study. For example, if the online random number generator produced the number 3, then college C was selected to participate in the study. Random selection of colleges continued until 47 colleges were randomly selected to participate.

Administrators associated with offices of the president, registrar or institutional effectiveness at the selected colleges were initially contacted by email to request permission for their faculty to participate in the current study. If permission was granted, then the administrators agreed to send an email letter of invitation (Appendix A) to their respective full-time and part-time faculty, inviting them to complete the survey (Appendix B).

Administrators were needed to send the letter of invitation and the survey since direct communication via email between this researcher and the study participants was not possible. This was due to the fact that faculty email addresses were not publicly available to this researcher nor to college administrators. Within colleges, email communication to faculty was commonly accomplished using a college-specific listserv of email addresses. Therefore, the administrators disseminated the email invitation and survey to their respective full-time and part-time faculty via the college-specific listserv.

The email invitation provided the purpose of the survey, assurance of confidentiality, notification of IRB approval by NCSU, a web link to the survey and deadline for submission. When voluntary study participants accessed the web link, they were automatically directed to

the survey. Participants were instructed that their choice to participate in the survey *was* their informed consent.

The survey remained available to participants for at least 14 days. In order to bolster response rates, administrators sent reminder emails along with the survey web link to their respective faculty at approximately 7-day intervals.

During the 13-month data collection period, 26 colleges (out of the original 47 colleges that were invited) accepted the invitation to participate. The remaining 21 colleges declined to participate by passively not responding to the invitation or by actively rejecting the invitation. Faculty at the 26 participating colleges completed and submitted the survey online. Data were compiled in a spreadsheet. Upon conclusion of the data collection period, a total of 840 surveys had been returned. Full-time faculty had submitted 645 surveys; part-time faculty submitted 168 surveys. For the remaining surveys, the faculty employment status survey item was left unanswered, resulting in missing data. Out of a total survey population of approximately 20,619 community college faculty in North Carolina, part-time faculty comprise nearly 70%. Yet, the part-time faculty in the study data set comprised just 19% of the responses. The under-representation of part-time faculty in this study is discussed in more detail in Chapter 5.

Missing Data

After preliminary screening of data, missing values among individual variables were addressed. The major problem with missing values is the potential for the remaining data set to be biased (Garson 2009).

To generate the final sample used for data analysis, this study used listwise depletion of missing data to ensure that all values were made available for the multiple regression analysis. After initial screening of the dataset for frequency distributions, listwise depletion was used 1) if respondents did not self-identify as faculty, 2) if respondents did not self-identify employment status as full-time or part-time, and 3) if entire sections of a submitted survey were incomplete. After listwise deletion, the resultant sub-sample dataset consisted of 788 completed survey responses; 635 responses had been completed by full-time faculty, 153 responses had been completed by part-time faculty

Garson (2009) warns responses excluded from the original dataset may threaten the representativeness of the original sample by introducing bias into the deleted dataset. Garson (2009) goes on to suggest that any variable with more than 5% missing values should not be deleted. Because the frequency distributions and variable means are roughly consistent between the initial dataset ($N = 840$) and the sub-sample ($N = 788$), the researcher did not utilize imputation techniques to approximate the missing values.

Recoding

Some variables required recoding. Recoding was necessary in order to combine responses into more meaningful groups for reporting and/or analysis. One variable that underwent recoding was the survey item that asked respondents to indicate their year of birth (see Appendix C). Moreover, dummy variables were created for individual categorical variables such as highest degree attained, number of years employed in current position, size of institution, and employment status (see Appendix C).

Data Analysis

The data were analyzed using the statistical package SAS, version 9.1.3. For all variables included in this study, descriptive statistics such as means and variances were ascertained to check for distributional normality.

Research Question 1: How do the mean levels of affective, continuance, and normative commitment for full-time faculty compare to mean levels of commitment for part-time faculty in North Carolina community colleges?

This question was addressed by analyzing the levels of affective, continuance, and normative commitment by employment status. Analysis was performed utilizing a one-way ANOVA, between-subjects design. This method is the most appropriate for analyzing a single categorical independent variable (employment status) with two categories (full-time or part-time) against multiple continuous dependent variables (O'Rourke, Hatcher, and Stepanski, 2005).

Research Question 2: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure) variables on *affective* commitment for full-time and for part-time community college faculty?

Research Question 3: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards

(intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure) variables on *continuance* commitment for full-time and for part-time community college faculty?

Research Question 4: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure) variables on *normative* commitment for full-time and for part-time community college faculty?

Research questions 2, 3 and 4 were addressed using a multiple regression technique, which examines the degree that a continuous dependent variable (affective commitment) is related to a combined set of continuous/categorical independent variables. In addition, the multiple regression technique is appropriate for the following reasons (O'Rourke, Hatcher, & Stepanski, 2005):

1. it provides model information for the study variables since it determines whether the linear combination of independent variables has a significant effect on the dependent variable
2. it determines whether a single independent variable is statistically significant in predicting the dependent variable
3. it accounts for the magnitude of variance that a single independent variable contributes to the dependent variable, beyond the variance accounted for by other independent variables.

Summary

This chapter described the quantitative methods used to examine how full-time and part-time faculty differ in their level of organizational commitment as well as to identify what factors predicted their organizational commitment. The data utilized in this study were gathered from a researcher-developed survey administered via email invitation to a random selection of community college faculty employed at small-, medium- and large-sized institutions. The survey included several scales that have been previously established in the literature. Evidence of their validity and reliability were presented. Likewise, there were several scales utilized in this study that previously had not been analyzed for validity and reliability. A brief introduction of exploratory factor analysis was presented to address the validity and reliability of these unestablished scales.

To answer the research questions, several statistical analysis techniques were described. First, analysis of variance was used in answering the first question to compare full-time and part-time faculty in their level of organizational commitment. To answer the remaining research questions, multiple regression was used to demonstrate which factors predict organizational commitment among full- and part-time community college faculty.

CHAPTER FOUR: RESULTS

Introduction

This chapter presents the results of the data analysis outlined in the preceding chapter. This study sought to answer the following research questions:

1: How do the mean levels of affective, continuance, and normative commitment for full-time faculty compare to mean levels of commitment for part-time faculty in North Carolina community colleges?

2: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure) variables on *affective* commitment for full-time and for part-time community college faculty?

3: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure) variables on *continuance* commitment for full-time and for part-time community college faculty?

4: What is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic and extrinsic) and demographic (age, education level, institution size, organizational tenure)

variables on *normative* commitment for full-time and for part-time community college faculty?

This chapter is comprised of four main sections. The first section will provide results from the exploratory factor analyses of the availability/transferability variables and of the rewards variables. The second section will provide a demographic profile of the survey respondents. The third section will address the first research question of the study by providing comparative information regarding the levels of affective, continuance, and normative commitment present among full-time and part-time North Carolina community college faculty. The fourth section will address research questions two, three and four by providing the analysis of the data regarding the effect of demographic, organizational, job alternatives/transferability, and reward variables on each of the three types of commitment. The combination of these four sections is essential to understanding full-time and part-time faculty commitment to their institutions and how this commitment develops.

Factor Analysis

The study conducted two exploratory factor analyses (EFA). The first EFA included the following variables: availability of job alternatives, transferability of skills, and transferability of education. The second EFA included the variables of intrinsic rewards, extrinsic organizational rewards and extrinsic social rewards.

The validity and reliability measures are well-documented in the literature for the constructs of organizational support, procedural justice, role conflict, role ambiguity, affective commitment, continuance commitment and normative commitment; therefore, these were not included in factor analysis studies. Tests of validity are not required of

demographic variables, such as age and length of employment (tenure at institution), because such items do not represent ambiguous attitudes and they are less vulnerable to translation errors and misinterpretation by both the survey designer and respondent.

Exploratory factor analysis (EFA) is a common procedure for construct validation since it is used to identify the factors latent in constructs. In this study, it was used to evaluate whether and how well the survey items represented constructs of interest.

To begin determining the optimal number of factors, the study initially extracted the number of factors believed to represent the constructs. This was accomplished using the maximum likelihood method (using SAS option *method = ml*). Each factor extracted in this first step accounted for the maximum amount of variance not already accounted for by other extracted factors; and each factor was uncorrelated to other extracted factors (Hatcher, 1994). The amount of variance in each factor is expressed as eigenvalues. The study continues with the options *priors = SMC* (denoting Squared Multiple Correlations) to request a factor analysis rather than the default Principal Components Analysis.

The next step is to determine the number of meaningful factors (n) to retain (using SAS option *nfact=n*), which produces a matrix of principal factors, eigenvalues and proportions of variance accounted for by the factors. To continue exploring factors, principal components with eigenvalues greater than 1.00 were initially retained, as recommended by the Kaiser criterion (Hatcher, 1994). However, factor components demonstrating an eigenvalue of 1.00 or greater account for a greater proportion of the variance than contributed by any individual variable. This characteristic of the Kaiser criterion explains why it may produce too many factors to be reliable (Hatcher, 1994).

After extraction of the initial factors, a factor pattern emerges. This pattern is often difficult to interpret when more than one factor has been retained (Hatcher, 1994). Therefore, a linear transformation of the factor is performed in order to simplify the interpretation of the factor solution. Linear transformation is achieved through rotation. For this study, oblique rotation (using SAS option *rotate = promax*) was specified. Oblique rotation results in factors that are correlated with one another (Hatcher, 1994).

With the purpose of interpreting the final solution to the EFA, this study established the following interpretation criteria: factors will have eigenvalues greater than 1.00, the proportion of variance accounted for by the sum of retained factors be nearly equal to 100%, and each item will have factor loadings of 0.40 or greater (Hatcher, 1994).

Factor Analysis of Job Alternatives/Transferability Variables

The nine items in the survey that corresponded to Job alternatives and Transferability variables were subjected to EFA using squared multiple correlations as prior communality estimates. The maximum likelihood method was used to extract the factors, and this was followed by a promax (oblique) rotation.

The scree plot obtained from EFA and presented in Figure 2 (see also Appendix D) illustrates there are three factors with eigenvalues exceeding 1.0. This curve suggests that three factors be retained.

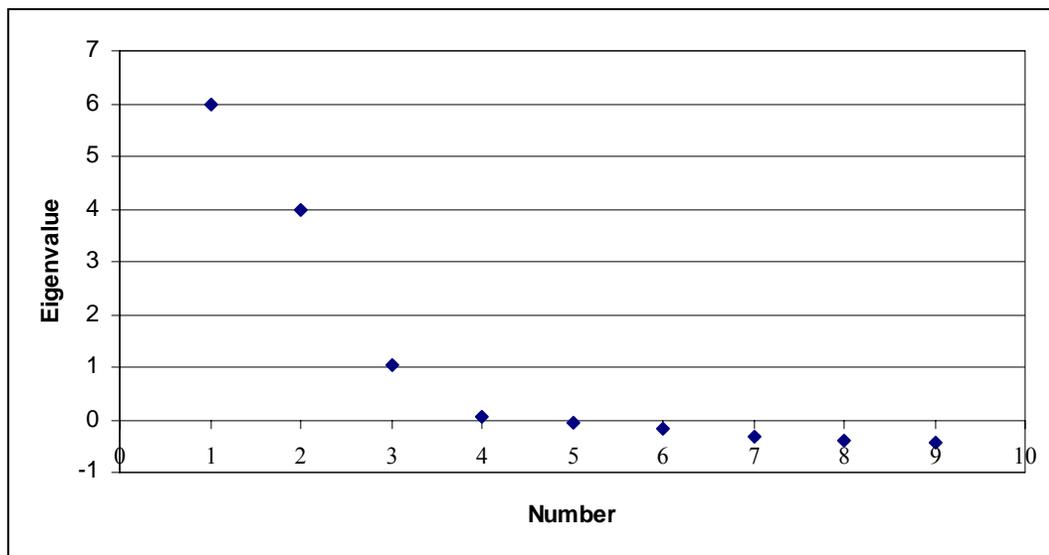


Figure 2: Scree plot of eigenvalues produced by exploratory factor analysis with nfact=3 for Availability/Transferability variables

In further interpretation of the rotated factor pattern, an item was said to load on a given factor if the factor loading was .40 or greater for that factor, and was less than .40 for the other. Using these criteria, four items were found to load on the first factor, labeled the Availability of Job Alternatives factor. Three items loaded on the second factor, labeled the Transferability of Skills factor. The remaining two items loaded on the third factor, labeled the Transferability of Education factor. Survey items and corresponding factor loadings are presented in Table 1.

Table 1

Survey Items, Corresponding Factor Loading and Final Community Estimates (h²)

Code	Survey Item	Factor			h ²
		1 ($\alpha=0.85$) Avail of Job alternatives	2 ($\alpha=0.78$) Trans of Skills	3 ($\alpha=0.75$) Trans of Education	
alterna	The lack of comparable jobs in other organizations available to me at this time	75	-11	-15	0.57
alternb	The likelihood of being unemployed	91	-6	-20	0.83
alternc	A high rate of unemployment among people in my occupation	81	-6	-22	0.65
alternd	The lack of success I've had in previous job searches	63	-7	-24	0.41
skile	My skills that I have obtained at my current organization would be useful at other organizations	-7	82	31	0.68
skilf	I have been able to transfer skills obtained from previous organizations to this one	-7	50	23	0.30
skilg	My experiences that I have obtained at my current organization would be useful at other organizations	-8	92	35	0.85
edui	I am confident that my formal education would be valued by other organizations	-22	31	75	0.56
eduj	My most recent degree/certificate that I earned will open doors for me professionally	-19	32	81	0.66

Note: N = 776. The proportion of variance explained by each factor, ignoring other factors is: 62% (factor 1), 41% (factor 2), 11% (factor 3).

Factor Analysis of Rewards Variables

Responses to the remaining 13 items in the survey that correspond to Rewards variables were subjected to EFA using squared multiple correlations as prior communality estimates. The maximum likelihood method was used to extract the factors, and this was followed by a promax (oblique) rotation.

The resultant scree plot obtained from EFA (Figure 3) illustrates there are three factors with eigenvalues exceeding 1.0 (see also Appendix E). This curve suggests that three factors be retained.

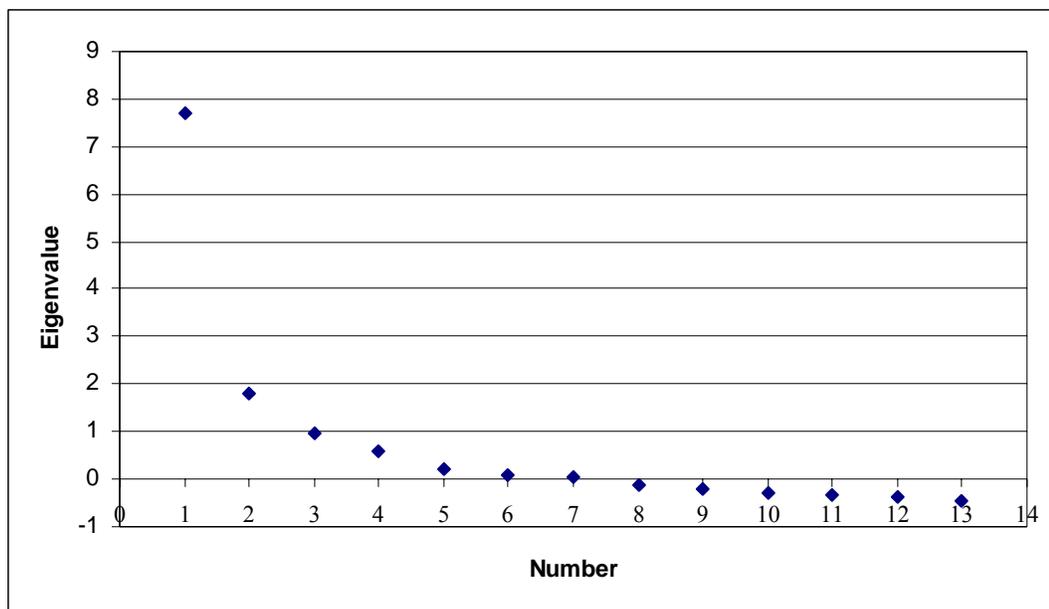


Figure 3: Scree plot of eigenvalues produced by exploratory factor analysis with nfact=3 for Rewards variables

In further interpretation of the rotated factor pattern, an item was said to load on a given factor if the factor loading was .40 or greater for that factor, and was less than .40 for the other. Using these criteria, two items were found to load on the first factor, labeled Extrinsic Rewards. Six items loaded on the second factor, labeled Intrinsic Rewards. Two items loaded on the third factor, labeled Extrinsic Financial Rewards. Three items failed to load on any factor. Survey items and corresponding factor loadings are presented in Table 2.

Table 2

Survey Items, Corresponding Factor Loading and Final Community Estimates (h²) from the Rotated Factor Pattern Matrix (Semipartial Correlations)

Code	Survey Item	Factor			h ²
		1 ($\alpha=0.82$) Extrinsic Rewards	2 ($\alpha=0.81$) Intrinsic Rewards	3 ($\alpha=0.74$) Extrinsic Financial Rewards	
intrinsa	The feeling of accomplishment I get from the work I do	13	60	0	0.71
intrinsb	The feeling of satisfaction I get from knowing I am making a contribution to student learning	-4	71	-2	0.72
intrinsc	The recognition I receive for the work I do	47	5	-4	0.42
intrinsd	The level of challenge posed by teaching at a college	32	23	-3	0.38
extorge	Opportunities for professional development	58	-2	5	0.51
extorgf	Opportunity to contribute to the community college mission	52	8	1	0.52
extorgg	The lack of opportunity for promotion	-3	0	76	0.66
extorgh	The lack of opportunity for salary increases	0	0	69	0.53
extorgi	The non-salary benefits package (e.g., vacation, medical, retirement, etc.) this institution provides	28	-2	-19	0.20
extorgj	Access to equipment and resources	44	-3	-10	0.33
extsock	The mutual feeling of respect gained by working with my colleagues	51	8	4	0.49
extsocl	The lack of camaraderie and collegiality among my colleagues	2	-3	17	0.03
extsocm	The ways in which my colleagues help me improve my work	58	-4	6	0.48

Note: N = 767. The proportion of variance explained by each factor, ignoring other factors is: 80% (factor 1), 19% (factor 2), 10% (factor 3).

Construct Reliability

The study measured Cronbach's coefficient alpha (α) for all multi-item continuous scale variables to estimate their reliability, or internal consistency. Analysis such as this provides insight to the extent in which individual items for each construct variable correlate

with one another (O'Rourke et al., 2005). Values for Cronbach's coefficient α were considered acceptable when $\alpha \geq 0.70$.

Estimates of internal consistency as measured by Cronbach's alpha for all of the multi-item continuous scale variables exceeded .70 and are reported on the diagonal of Tables 12, 14 and 16. Additionally, Appendix F presents the Pearson's intercorrelations between survey items for each multi-item continuous scale variable.

Profile of Respondents

Presenting descriptive analysis of the data is important to illustrate context for the participants in the study. Demographic items were included in the survey to establish this context. The profile of the respondents examined the demographic characteristics of respondents' age, highest degree attained (education), number of years employed in current position (tenure), and size of institution. Following the demographic profile, descriptive statistics of the organizational, alternative/transferability and rewards variables are presented.

Age

The survey question for age allowed for a free-text, open response. The mean age of the respondents who answered this question is 48.41 years. Table 3 illustrates the mean age for the entire respondent population is very nearly identical to the mean age for the full-time faculty ($\bar{X} = 48.63$) as well as the part-time faculty ($\bar{X} = 47.61$).

Table 3

Mean Age of Responding North Carolina Community College Faculty

	Employment			
	Status	\bar{X}	s	N
Age (in years)	Full-time	48.63	10.22	584
	Part-time	47.61	12.63	150
	All	48.41	10.75	734

Cases Missing: N = 54, 6.8%

Note: There is variance among the total population, as some respondents did not respond to various demographic questions.

Education

The survey question for education asked respondents to indicate the highest level of educational degree they have attained. Table 4 illustrates that the majority (68.16%) of responding North Carolina community college faculty have earned a Master's degree. The second most frequent degree attained by respondents is a Bachelor's degree (13.86%), followed by a Doctorate (10.53%), then an Associate's degree (6.16%), and finally a High School diploma (1.28%).

Furthermore, Table 4 illustrates that the frequency distribution pattern described above for all respondents is borne out when the respondents are stratified by employment status (full-time and part-time faculty). It is interesting to note that a higher percentage of part-time faculty (13.16%) have a doctorate compared to the full-time faculty (9.89%). None of the part-time faculty reported a High School diploma as the highest degree attained.

Altogether, these data suggest that full-time and part-time faculty in the sample have similar educational backgrounds.

Table 4

Frequency Distribution of Responding North Carolina Community College Faculty
by Highest Degree Attained

		Degree					
		High School	Associate	Bachelor	Master	Doctorate	Total
Full-time	n	10	40	84	431	62	627
	Row %	1.59%	6.38%	13.40%	68.74%	9.89%	80.49%
	Column %	100.00%	83.33%	77.78%	81.17%	75.61%	
Part-time	n	0	8	24	100	20	152
	Row %	0.00%	5.26%	15.79%	65.79%	13.16%	19.51%
	Column %	0.00%	16.67%	22.22%	18.83%	24.39%	
Total	n	10	48	108	531	82	779
	%	1.28%	6.16%	13.86%	68.16%	10.53%	100.00%

Cases Missing: N =9, 1.1%

Note: The demographic characteristics are presented in bivariate tables. There is a variance in the total population for each table, as some respondents did not respond to various demographic questions.

Tenure

The survey question for tenure asked respondents to indicate how many years they have been employed in their current position. Table 5 illustrates that nearly one-third (31.87%) of responding North Carolina community college faculty have been employed in their current position for one to four years, while nearly another one-third have been employed for five to nine years (30.97%). Nearly another one-third (28.52%) have been employed for more than 10 years in their current position. Less than 10% of respondents have been employed for less than 1 year.

Table 5

Frequency Distribution of Responding North Carolina Community College Faculty by Number of Years Employed in Current Position

		Years Employed in Current Position					
		Less than 1 year	1 - 4 years	5 - 9 years	10 - 14 years	15 years or more	Total
Full-time	n	53	166	201	95	108	623
	Row %	8.51%	26.65%	32.26%	15.25%	17.34%	80.39%
	Column %	79.10%	67.21%	83.75%	92.23%	91.53%	
Part-time	n	14	81	39	8	10	152
	Row %	9.21%	53.29%	25.66%	5.26%	6.58%	19.61%
	Column %	20.90%	32.79%	16.25%	7.77%	8.47%	
Total	n	67	247	240	103	118	775
	%	8.65%	31.87%	30.97%	13.29%	15.23%	100.00%

Cases Missing: $N = 13$, 1.6%

Note: The demographic characteristics are presented in bivariate tables. There will be a variance in the total population for each table, as some respondents did not respond to various demographic questions.

Furthermore, Table 5 illustrates that the frequency distribution pattern described above for all respondents is somewhat different when the respondents are stratified by employment status (full-time and part-time faculty). Whereas more than one-third (32.59%) of full-time faculty have been employed in their current position for 10 years or more, only 9% of part-time faculty reported being in their current position for that long. Moreover, less than one-third of full-time faculty reported being employed for one to four years, while over one-half of part-time faculty reported being employed for that long. Nearly an equal fraction of full-time faculty (8.51%) and part-time faculty (9.21%) have been employed for less than one year.

Altogether, these data illustrate that a larger percentage of full-time faculty in this sample have worked longer in their current position than their part-time counterparts, suggesting that full-time faculty may have higher levels of organizational commitment.

Institution Size

The National Center for Education Statistics (NCES) classifies 2-year postsecondary institutions based on the unduplicated headcount enrollment. An institution classified as small by the NCES enrolls less than 2,000 students; an institution classified as medium enrolls between 2,000 and 9,999 students; and, an institution classified as large enrolls at least 10,000 students (Goan & Cunningham, 2007).

The respondents' institutional affiliation was tracked as surveys were submitted online. The researcher then classified each respondent's institutional affiliation according to the NCES classification schema. Table 6 illustrates that the majority (73.98%) of responding North Carolina community college faculty are affiliated with a medium-sized institution. The second most frequent affiliation is the large-sized institution (21.19%), followed finally by the small-sized institution (4.82%).

Furthermore, when the respondents are stratified by employment status (full-time and part-time faculty), Table 6 illustrates the frequency distribution pattern described above for all respondents is borne out.

Altogether, these data suggest that both full-time and part-time faculty in the sample population are affiliated with similar-sized institutions.

Table 6

Frequency Distribution of Responding North Carolina Community College Faculty by Size of Institution

		Institution Size			
		Small (<2,000)	Medium (2,000 – 9,999)	Large (>10,000)	Total
Full-time	n	28	473	134	635
	Row %	4.41%	74.49%	21.10%	80.58%
	Column %	73.68%	81.13%	80.24%	
Part-time	n	10	110	33	153
	Row %	6.54%	71.90%	21.57%	19.42%
	Column %	26.32%	18.87%	19.76%	
Total	n	38	583	167	788
	%	4.82%	73.98%	21.19%	100.00%

Cases Missing: N =0, 0.0%

Note: The demographic characteristics are presented in bivariate tables. There will be a variance in the total population for each table, as some respondents did not respond to various demographic questions.

Organizational, Job alternatives/Transferability and Rewards Variables

Table 7 presents descriptive statistics for the organizational, job alternatives/transferability and rewards variables. Examination of mean scores shows that full-time and part-time faculty scores for each variable were nearly equivalent. Potential exceptions to this observation may be found in the role conflict and availability of job alternatives variables. Compared to the part-time faculty mean scores, the full-time faculty mean score is higher for role conflict, but lower for availability of job alternatives.

Table 7

Mean Scores of Independent Variables for Responding North Carolina Community College Faculty

Variable	Employment		Score Range			
	Status	\bar{X}	s	Min	Max	N
Organizational Support	Full-time	5.06	1.34	1.00	7.00	635
	Part-time	5.05	1.27	1.00	7.00	153
	All	5.06	1.32	1.00	7.00	788
Procedural Justice	Full-time	5.07	1.50	1.00	7.00	635
	Part-time	5.06	1.32	1.00	7.00	153
	All	5.07	1.47	1.00	7.00	788
Role Ambiguity	Full-time	5.51	1.22	1.00	7.00	634
	Part-time	5.71	1.07	2.50	7.00	153
	All	5.55	1.19	1.00	7.00	787
Role Conflict	Full-time	3.71	1.58	1.00	7.00	635
	Part-time	3.06	1.47	1.00	7.00	153
	All	3.58	1.58	1.00	7.00	788
Availability of Job alternatives	Full-time	2.87	1.62	1.00	7.00	633
	Part-time	3.24	1.87	1.00	7.00	153
	All	2.94	1.67	1.00	7.00	786
Transferability of Skills	Full-time	6.37	0.85	1.00	7.00	635
	Part-time	6.28	0.91	2.67	7.00	153
	All	6.36	0.86	1.00	7.00	788
Transferability of Education	Full-time	5.91	1.29	1.00	7.00	634
	Part-time	5.82	1.36	1.00	7.00	153
	All	5.90	1.31	1.00	7.00	787
Intrinsic Rewards	Full-time	6.46	0.80	1.00	7.00	635
	Part-time	6.37	0.82	2.00	7.00	153
	All	6.45	0.80	1.00	7.00	788

Table 7 Continued

Variable	Employment Status	\bar{X}	s	Score Range		N
				Min	Max	
Extrinsic Rewards	Full-time	5.23	1.11	1.00	7.00	635
	Part-time	4.92	1.18	1.00	7.00	153
	All	5.17	1.13	1.00	7.00	788
Extrinsic Financial Rewards	Full-time	4.82	1.34	1.00	7.00	635
	Part-time	4.82	1.39	1.00	7.00	153
	All	4.82	1.35	1.00	7.00	788

Analysis of Research Question One

The first research question is concerned with comparing the levels of affective, continuance, and normative commitment between full-time and part-time North Carolina community college faculty. The most direct method for comparing the levels of commitment present among the population is to examine the mean scores for each commitment type.

Table 8

Mean Scores of Affective, Continuance, and Normative Commitment of Responding North Carolina Community College Faculty

Commitment Type	\bar{X}	s	Score Range		N
			Min	Max	
Affective	5.12	1.53	1.00	7.00	788
Continuance	4.47	1.57	1.00	7.00	788
Normative	3.81	1.19	1.00	7.00	787

Table 8 presents the mean scores, standard deviations and sample population for each of the three types of commitment among responding North Carolina community college faculty. The highest mean is affective commitment ($\bar{X} = 5.12$) out of a possible 7.00,

followed by continuance commitment ($\bar{X} = 4.47$), and finally by normative commitment ($\bar{X} = 3.81$).

The mean scores indicate that North Carolina community college faculty would slightly-to-moderately agree that they are affectively committed, meaning that they stay in the college because they want to stay. This level of affective commitment is generally in accordance with other studies that have utilized the Affective Commitment Scale in the higher education setting. Messer (2006) reported a mean score of affective commitment for Tulsa Community College faculty at 5.23 ($SD = 1.33$). Carver (2008) reported that a national sample of nursing faculty produced a mean score of 4.41 ($SD = 1.22$) for affective commitment. This study's reported level of commitment, however, is slightly higher than the reported a mean score of affective commitment for Christian higher education faculty at 3.11 ($SD = 1.12$) on a 5-point scale (Thomas 2008).

The mean scores also indicate that North Carolina community college faculty neither agree nor disagree with the statements included in continuance commitment, meaning they may or may not be "aware of the costs associated with leaving" (Meyer and Allen, 1997, p. 11) the college. This level of commitment is higher in comparison with Carver's (2008) study of nursing faculty who produced a mean score of 2.70 ($SD = 1.12$) for continuance commitment; but it is in accordance with Thomas' (2008) reported a mean score of continuance commitment for Christian higher education faculty at 3.10 ($SD = 0.72$) on a 5-point scale.

Lastly, the mean scores show that North Carolina community college faculty would slightly disagree they are normatively committed, meaning that they may not remain at the

college because of a sense of obligation to the organization. This level of commitment is in accordance with Carver's (2008) study of nursing faculty who produced a mean score of 3.78 ($SD = 1.17$) for normative commitment; but it is lower than Thomas' (2008) reported a mean score of normative commitment for Christian higher education faculty at 2.96 ($SD = 1.05$) on a 5-point scale.

In addition to mean scores, it is also useful to look at the correlations between the three types of commitment in order to observe the interactions between them. A correlation analysis was performed in SAS.

Table 9 presents the Pearson correlation statistics of the three types of commitment among the respondents of the current study, along with the weighted average corrected correlation for the scales as reported in the meta-analysis by Meyer, Stanley, Herscovitch, and Topolnytsky (2002).

Table 9

Pearson Correlation Statistics of Affective, Continuance, and Normative Commitment for the Current Study and for Meta-Analysis by Meyer and Associates (2002)

	Current Study			Previous Study		
	ACS	CCS	NCS	ACS	CCS	NCS
ACS	1.00			1.00		
CCS	0.62*	1.00		0.05	1.00	
NCS	0.29*	0.35*	1.00	0.63	0.18	1.00

Note: ACS, Affective Commitment Scale; CCS, Continuance Commitment Scale; NCS, Normative Commitment Scale.

* $p < 0.001$

There is a positive relationship between affective commitment and continuance commitment, $r = .62, p < .001$, between affective and normative commitment, $r = .29, p <$

.001, as well as between continuance commitment and normative commitment, $r = .35, p < .001$.

The direction of the relationship between each type of commitment in the current study is in the same direction as the relationships in the metaanalysis of Meyer and associates (2002). However, the magnitude of the relationships is noticeably different, in that the relationship between affective and continuance commitment is quite strong compared to what is reported in the literature. This difference may indicate that North Carolina community college faculty perceive continuance commitment more positively than other groups who participated in studies using the continuance commitment scale.

In general, these correlation coefficients indicate that as a North Carolina community college faculty member exhibits increased affective commitment, their continuance commitment –the feeling that they stay because they have to – and their normative commitment – the obligation to the organization –also increases.

Commitment by Faculty Employment Status

The first research question compares the levels of affective, continuance, and normative commitment for full-time faculty to the levels of commitment exhibited by part-time faculty in North Carolina community colleges. The analysis of the levels of affective, continuance, and normative commitment by employment status was performed utilizing a one-way ANOVA, between-subjects design. This method is the most appropriate for analyzing a single categorical independent variable (employment status) with two categories (full-time or part-time) against multiple continuous dependent variables (O'Rourke, Hatcher, and Stepanski, 2005).

Table 10 presents the mean scores, standard deviations, and sample sizes for each of the three types of commitment for responding North Carolina community college faculty. Faculty scored affective commitment highest of the three types ($\bar{X} = 5.12$), followed by continuance commitment ($\bar{X} = 4.47$), and finally by normative commitment ($\bar{X} = 3.82$).

Table 10

Mean Scores of Affective, Continuance, and Normative Commitment by Employment Status of Responding North Carolina Community College Faculty

	Employment			
	Status	\bar{X}	s	N
Affective Commitment	Full-time	5.24	1.47	635
	Part-time	4.64	1.61	153
	All	5.12	1.51	788
Continuance Commitment	Full-time	4.52	1.53	635
	Part-time	4.28	1.52	153
	All	4.47	1.53	788
Normative Commitment	Full-time	4.00	1.53	634
	Part-time	3.07	1.51	153
	All	3.82	1.57	787

Table 10 also illustrates the frequency distribution pattern described above for all faculty is borne out when the respondents are stratified by employment status (full-time and part-time faculty), with affective commitment being the highest. Furthermore, full-time faculty show higher levels of commitment for each of the three types than part-time faculty. The trend is especially apparent for normative commitment, where the mean level for full-time faculty is 4.00, and 3.07 for part-time faculty.

Table 11 presents the mean differences and effect sizes for the comparisons of employment status for affective, continuance, and normative commitment. For affective commitment, there is a significant difference between full-time and part-time employment status ($p < .001$). Moreover, the magnitude of the difference is small to medium when effect

size considered, as the effect-size $r = 0.19$ (Cohen, 1988). Despite the small to medium effect size, this data supports the conclusion that affective commitment is higher among full-time faculty. Recall that affective commitment is expressed by the statement “I stay because I want to stay.”

Table 11

Mean Differences and Effect Sizes of Employment Status for Responding North Carolina Community College Faculty by Type of Commitment

	Employment Status (a)	Employment Status (b)	Mean Difference (a - b)	p	Effect size r
Affective Commitment	Full-time	Part-time	0.60	0.000*	0.19
Continuance Commitment	Full-time	Part-time	0.24	0.091	0.08
Normative Commitment	Full-time	Part-time	0.93	0.000*	0.29

Note: p = significance; r = effect-size correlation.

* $p < 0.05$

For continuance commitment, the difference between full-time and part-time employment status is approaching significance ($p < .05$). However, the magnitude of the difference is small if not non-existent when effect size considered, as the effect-size $r = 0.08$ (Cohen, 1988). Altogether, these data suggest that levels of continuance commitment are nearly identical between full-time and part-time faculty. Recall that continuance commitment is expressed by the statement “I stay in the organization because I have to.”

For normative commitment, there is a significant difference between full-time and part-time employment status ($p < .001$). Moreover, the magnitude of the difference is medium when effect size considered, as the effect-size $r = 0.29$ (Cohen, 1988). Despite the

medium effect size, this data supports the conclusion that normative commitment is increased among full-time faculty. Recall that normative commitment is expressed by the statement “I stay in the organization out of a sense of obligation.”

This section has demonstrated that full-time faculty in North Carolina community colleges are generally more committed to their organizations than part-time faculty. The next section of this chapter will provide important context as to how this commitment develops, by examining the influence of independent variables on the three types of commitment.

Results of Research Question Two: Regression Analysis of Affective Commitment

The second research question addresses the predictive value of independent variables on affective commitment. Specifically, the second research question asks: what is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic financial) and demographic (age, education level, institution size, organizational tenure) variables on *affective* commitment for full-time and for part-time community college faculty?

Bivariate Associations

The following section explores measures of association among and between the independent predictor variables and affective commitment. Measures of association are important because they reflect the strength of the relationship between the variables and they test the statistical significance of that relationship. Examination of the bivariate associations allows one to anticipate the influence of the variables in the final regression model.

Table 12 displays the bivariate associations between variables for the affective commitment regression model. Table 12 indicates moderate intercorrelations between organizational support and procedural justice ($r = 0.67$), between organizational support and role ambiguity ($r = 0.50$), and between respondents' length of employment (tenure) and age ($r = 0.40$). A closer review of the definitions of these variables reveals potential conceptual overlap. Specifically, an organization that is perceived as supportive presumably has delineated fair practices and procedures for faculty employees. Moreover, a supportive organization has defined clear, non-ambiguous behavioral requirements for employees in their work role as faculty member. With respect to faculty length of employment (tenure), it is reasonable to conclude that employees' tenure at an organization increases as they grow older.

Based on the review of variable definitions and evidence of moderate intercorrelations among these variables, the potential for conceptual overlap is quite high. Therefore, procedural justice, role ambiguity, and length of employment were deleted from the regression model.

Table 12 also illustrates that statistically significant ($p < .05$) positive correlations exist between affective commitment and the following variables: organizational support, transferability of skills, transferability of education, intrinsic and extrinsic rewards and respondents' age.

Statistically significant ($p < .05$), negative correlations exist between affective commitment and the following variables: role conflict, availability of job alternatives, extrinsic financial rewards and education level.

Table 12

Bivariate Correlations and Cronbach's Alpha Estimates for Affective Commitment Regression Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Affective Comm	Org Support	Proc Justice	Role Conflict	Role Amb	Job Altern	Trans Skills	Trans Edu	Int Reward	Ext Reward	Ext Fin Reward	Age	Degree	Tenure	Size
1	(0.90)														
2	r=0.66*	(0.91)													
3	r=0.53*	r=0.67*	(0.95)												
4	r=-0.38*	r=-0.56*	r=-0.48*	(0.91)											
5	r=0.44*	r=0.50*	r=0.50*	r=-0.52*	(0.88)										
6	r=-0.43*	r=-0.46*	r=-0.35*	r=0.36*	r=-0.35*	(0.85)									
7	r=0.25*	r=0.22*	r=0.24*	r=-0.15*	r=0.32*	r=-0.09*	(0.78)								
8	r=0.22*	r=0.20*	r=0.16*	r=-0.05*	r=0.23*	r=-0.21*	r=0.33*	(0.75)							
9	r=0.39*	r=0.33*	r=0.30*	r=-0.21*	r=0.40*	r=-0.20*	r=0.41*	r=0.26	(0.81)						
10	r=0.65*	r=0.60*	r=0.57*	r=-0.41*	r=0.49*	r=-0.33*	r=0.35*	r=0.28	r=0.54*	(0.83)					
11	r=-0.21*	r=-0.26*	r=-0.16*	r=0.12*	r=-0.11*	r=0.10*	r=-0.01	r=-0.02	r=-0.04	r=-0.22*	(0.74)				
12	r=0.12*	r=-0.03	r=-0.03	r=0.05	r=0.03	r=-0.02	r=0.05	r=0.01	r=0.05	r=-0.00	r=-0.08*	--			
13	r _s =-0.15*	r _s =-0.10*	r _s =-0.07	r _s =0.07*	r _s =-0.07*	r _s =0.13*	r _s =-0.05	r _s =0.07	r _s =-0.09*	r _s =-0.10*	r _s =0.10*	r _s =0.10*	--		
14	r _s =0.12*	r _s =-0.11*	r _s =-0.05	r _s =0.16*	r _s =0.00	r _s =-0.01	r _s =0.02	r _s =-0.06	r _s =0.03	r _s =0.00	r _s =0.03*	r _s =0.40*	Φ=0.15	--	
15	r _s =-0.06	r _s =0.05	r _s =0.12*	r _s =-0.03	r _s =0.01	r _s =-0.07	r _s =-0.04	r _s =0.03	r _s =0.01	r _s =0.02	r _s =-0.01	r _s =0.01	Φ=0.12	Φ=0.11	--

Note. Reliability estimates appear in parentheses on the diagonal. *p < 0.05

The variable of institution size was the only one that was not significantly correlated with affective commitment. These correlations are consistent with expectation for six of the variables. Review of the literature (Meyer et al., 2002; Gormley, 2005) suggests that as organizational support, transferability of skills, respondents' age increase, affective commitment should also increase. Similarly, as role conflict, availability of job alternatives and respondents' education level increase, affective commitment should decrease.

One exception to expectations was the correlation between transferability of education and affective commitment. Based on the literature (Meyer et al., 2002), the author predicted that higher levels of transferability of education would negatively impact affective commitment. However, this study showed these variables were positively associated with affective commitment.

There are few studies in the literature that specifically address correlations between rewards and affective commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does affective commitment. This is consistent with the literature (Mottaz, 1988; Coberly, 2004; Carlson, 2005) that reports commitment in general increases as intrinsic and extrinsic rewards increase. The current study also demonstrates that when extrinsic financial rewards increase, affective commitment decreases.

Multicollinearity

Measures of association between the independent predictor variables were also examined for evidence of multicollinearity. Multicollinearity is defined as "a high degree of correlation among several independent variables" (Freund & Littell, 2000, p. 95).

Multicollinearity within regression models often results when there is a large number of

variables in the model. If multi-collinearity exists in a model, then the predicted variances for the independent variables and for the parameter estimates (i.e. regression coefficients) tend to be inflated (Freund & Littell, 2000).

Because interpretation of regression coefficients is essential to multiple regression analysis, it is desirable to detect multicollinearity. Table 12 shows there were no substantial correlations ($R > .9$) between predictors. In addition, tolerance values, variance inflation factors (VIF), eigenvalues, and condition indices were calculated (Appendix G) to provide more information about possible multicollinearities.

Tolerance estimates indicate the amount of variance in a given independent variable that is *not* explained by other independent variables in the analysis. Tolerance is calculated as $1 - R^2$. Values close to 1.0 suggest independence. Tolerance values less than 0.10, with large standard errors and small p values, may reflect multicollinearity. Of the variables evaluated, none met these criteria.

Value Inflation Factors (VIF) also indicate the amount of variance in a given independent variable. VIF is calculated as $1/1 - R^2$. VIF values at or close to 1.0 suggest independence. A VIF greater than 1.0 indicates some degree of multicollinearity; moreover, VIF values above 10.0 are the most worrisome (Freund & Littell, 2000). Eight items exceeded that threshold: organizational support, status, and seven of the eight interaction terms. The interaction terms were created intentionally and do not reflect collinearity.

Wide variation in eigenvalues and eigenvalues close to 0.00 are evidence of multicollinearity. Eigenvalues in this study ranged from 0.00 to 7.22. Those items closest to

0.00 were the interaction terms whose intentional linear relationships do not necessarily reflect collinearity.

Finally, condition index values exceeding 15.0 indicate strong multicollinearity and values exceeding 30.00 indicate severe multicollinearity (Belsley, Kuh, & Welsch, 1980). Only a handful of items crossed this threshold, and they were the interaction term variables whose relationship was intentional. Altogether, statistics were within acceptable parameters for continuous variables, further ruling out concerns for multicollinearity.

Multiple Regression

The purpose of multiple regression is to understand the predictive relationship of the independent variables (X) on the dependent variable (Y). The regression model is mathematically expressed as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_k X_k + \text{error}$$

The α is the intercept -- it is where the regression line intercepts the y axis, representing the value of Y when all X variables are zero. The partial regression coefficient (b) represents the amount that Y changes when the corresponding X changes one unit, holding the other variables constant. The standardized regression coefficients or beta weights (β) are estimates of the relative contributions of the independent variables in the model. Standardization permits comparison between the X variables.

Creation of interaction terms

This study sought to explore the predictive value of 12 independent variables (X) for affective commitment (Y), for both full-time and part-time community college faculty. In order to determine which independent variables were predictive for full-time faculty and for

part-time faculty and in order to test if differences exist between the standardized regression coefficients (β) of full-time faculty and of part-time faculty, it was necessary to create an interaction term for each predictor variable (excluding demographic variables) and faculty employment status (e.g. $\text{orgsupport} * \text{status}$). Demographic variables were held as constants in the regression model and therefore creation of interaction terms was not necessary for them. Therefore, the final regression model included 12 independent variables and 8 interaction terms.

$$Y' = \beta_1(\text{org support}) + \beta_2(\text{role conflict}) + \beta_3(\text{avail job alternatives}) + \beta_4(\text{transfer skills}) + \beta_5(\text{trans education}) + \beta_6(\text{intrinsic rewards}) + \beta_7(\text{extrinsic rewards}) + \beta_8(\text{extrinsic financial rewards}) + \beta_9(\text{employment status}) + \beta_{10}(\text{degree}) + \beta_{11}(\text{institution size}) + \beta_{12}(\text{age}) + \beta_{13}(\text{org support} * \text{status}) + \beta_{14}(\text{role conflict} * \text{status}) + \beta_{15}(\text{avail job alternatives} * \text{status}) + \beta_{16}(\text{transfer skills} * \text{status}) + \beta_{17}(\text{trans education} * \text{status}) + \beta_{18}(\text{intrinsic rewards} * \text{status}) + \beta_{19}(\text{extrinsic rewards} * \text{status}) + \beta_{20}(\text{extrinsic financial rewards} * \text{status}) + \text{error}$$

Results

Using forced entry multiple regression, affective commitment scores were then regressed on the linear combination of all predictor variables using the *proc reg* procedure in SAS. Beta values, standard errors, and standardized betas for the regression model utilized in this analysis are presented in Table 13. Significance of the regression model is evaluated through an *F* test statistic and its associated *p* value. Table 13 shows *F* (56.47) was significantly different from zero ($p < .0001$).

The R^2 value, or coefficient of determination, is used to estimate the overall goodness of fit. The R^2 value is interpreted as the amount of variance in *Y* explained collectively by all of the *X* variables. As R^2 approaches 1.0, the model begins to account for nearly all of the variability in the *Y*. The R^2 value obtained in Table 13 indicates the model accounts for 61%

of the variance in affective commitment. Additional regression model output can be found in Appendix G.

Table 13

Multiple Regression of Affective Commitment

Predictor	b	SE b	t Value	Pr > t	β
Org Support	0.41	0.09	4.43	<.0001	0.35
Role Conflict	-0.03	0.07	-0.40	0.69	-0.03
Job alternatives	-0.06	0.05	-1.21	0.23	-0.07
Transfer Skills	0.02	0.11	0.15	0.88	0.01
Transfer Education	-0.02	0.07	-0.30	0.76	-0.02
Intrinsic Rewards	0.23	0.13	1.82	0.07	0.12
Extrinsic Rewards	0.46	0.10	4.68	<.0001	0.34
Extrinsic Financial Rewards	-0.13	0.06	-1.98	0.05	-0.11
Status	-0.30	1.14	-0.27	0.79	-0.08
Degree	-0.15	0.05	-3.14	0.00	-0.08
Size	-0.25	0.07	-3.35	0.00	-0.08
Age	0.02	0.00	5.51	<.0001	0.13
Status*Orgsupport	0.13	0.10	1.22	0.22	0.20
Status*Rolconflict	0.08	0.08	1.09	0.27	0.11
Status*Alternative	-0.04	0.06	-0.66	0.51	-0.05
Status*Skills	0.00	0.12	0.03	0.98	0.01
Status*Edu	0.05	0.08	0.65	0.51	0.09
Status*Intreward	-0.13	0.14	-0.94	0.35	-0.24
Status*Extreward	-0.05	0.11	-0.48	0.63	-0.08
Status*ExtFinReward	0.14	0.07	1.96	0.05	0.21

Note. $R^2 = .61$ ($F[20, 711] = 56.47$), $p < .0001$ for predictor variables

Organizational support, extrinsic rewards, extrinsic financial rewards, degree attained, size of institution and age of respondent each made significant contributions to the variance in affective commitment ($p < .05$). Although intrinsic rewards was not a significant contributor to the variance in affective commitment, the variable did approach significance at $p = .07$.

The interaction term of Status*Extrinsic financial rewards was also a significant ($p = .05$) contributor to the regression model. This means extrinsic financial rewards have a

significant *positive* effect on affective commitment when one takes into account full-time status. Taking full-time status into account reverses the relationship between extrinsic financial rewards and affective commitment, since the extrinsic financial awards alone had a significant *negative* effect on affective commitment.

Analysis of the beta coefficients for extrinsic financial rewards was conducted to examine if the coefficients were different for full-time faculty versus part-time faculty. Results of the analysis show the contribution of extrinsic financial rewards to affective commitment is indeed different for the faculty groups. Specifically, regression model and F-test analyses show that as financial rewards increase, affective commitment decreases for part-time faculty. At the same time, these analyses show that as financial rewards increase for full-time faculty, affective commitment remains uninfluenced.

None of the other predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables and affective commitment were the same for both full-time and part-time faculty. The variables of role conflict, availability of job alternatives, transferability of skills and education and intrinsic rewards did not contribute to the variance in affective commitment.

Results of Research Question Three: Regression Analysis of Continuance Commitment

The third research question addresses the predictive value of independent variables on continuance commitment. Specifically, the third research question asks: what is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic

financial) and demographic (age, education level, institution size, organizational tenure) variables on *continuance* commitment for full-time and for part-time community college faculty?

Bivariate Associations

The following section explores measures of association among and between the independent predictor variables and continuance commitment. Measures of association are important because they reflect the strength of the relationship between the variables and they test the statistical significance of that relationship. Examination of the bivariate associations allows one to anticipate the influence of the variables in the final regression model.

Table 14 displays the bivariate associations between variables for the continuance commitment regression model. Table 14 indicates moderate intercorrelations between organizational support and procedural justice ($r = 0.67$), between organizational support and role ambiguity ($r = 0.50$), and between respondents' length of employment (tenure) and age ($r = 0.40$). A closer review of the definitions of these variables reveals potential conceptual overlap. Specifically, an organization that is perceived as supportive presumably has delineated fair practices and procedures for faculty employees. Moreover, a supportive organization has defined clear, non-ambiguous behavioral requirements for employees in their work role as faculty member. With respect to faculty length of employment (tenure), it is reasonable to conclude that employees' tenure at an organization increases as they grow older.

Based on the review of variable definitions and evidence of moderate intercorrelations among these variables, the potential for conceptual overlap is quite high.

Table 14

Bivariate Correlations and Cronbach's Alpha Estimates for Continuance Commitment Regression Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	Contin Comm	Org Support	Proc Justice	Role Conflict	Role Amb	Job Altern	Trans Skills	Trans Edu	Int Reward	Ext Reward	Ext Fin Reward	Age	Degree	Tenure	Size	
1	(0.87)															
2	r=0.58*	(0.91)														
3	r=0.51*	r=0.67*	(0.95)													
4	r=-0.35*	r=-0.56*	r=-0.48*	(0.91)												
5	r=0.36*	r=0.50*	r=0.50*	r=-0.52*	(0.88)											
6	r=-0.34*	r=-0.46*	r=-0.35*	r=0.36*	r=-0.35*	(0.85)										
7	r=0.17*	r=0.22*	r=0.24*	r=-0.15*	r=0.32*	r=-0.09*	(0.78)									
8	r=0.19*	r=0.20*	r=0.16*	r=-0.05*	r=0.23*	r=-0.21*	r=0.33*	(0.75)								
9	r=0.32*	r=0.33*	r=0.30*	r=-0.21*	r=0.40*	r=-0.20*	r=0.41*	r=0.26	(0.81)							
10	r=0.54*	r=0.60*	r=0.57*	r=-0.41*	r=0.49*	r=-0.33*	r=0.35*	r=0.28	r=0.54*	(0.83)						
11	r=-0.24*	r=-0.26*	r=-0.16*	r=0.12*	r=-0.11*	r=0.10*	r=-0.01	r=-0.02	r=-0.04	r=-0.22*	(0.74)					
12	r=0.08*	r=-0.03	r=-0.03	r=0.05	r=0.03	r=-0.02	r=0.05	r=0.01	r=0.05	r=-0.00	r=-0.08*	--				
13	r _s =-0.18*	r _s =-0.10*	r _s =-0.07	r _s =0.07*	r _s =-0.07*	r _s =0.13*	r _s =-0.05	r _s =0.07	r _s =-0.09*	r _s =-0.10*	r _s =0.10*	r _s =0.10*	--			
14	r _s =-0.01	r _s =-0.11*	r _s =-0.05	r _s =0.16*	r _s =0.00	r _s =-0.01	r _s =0.02	r _s =-0.06	r _s =0.03	r _s =0.00	r _s =0.03*	r _s =0.40*	Φ=0.15	--		
15	r _s =-0.00	r _s =0.05	r _s =0.12*	r _s =-0.03	r _s =0.01	r _s =-0.07	r _s =-0.04	r _s =0.03	r _s =0.01	r _s =0.02	r _s =-0.01	r _s =0.01	Φ=0.12	Φ=0.11	--	

Note. Reliability estimates appear in parentheses on the diagonal. *p < 0.05

Therefore, procedural justice, role ambiguity, and length of employment were deleted from the regression model.

Table 14 also indicates that statistically significant ($p < .05$) positive correlations exist between continuance commitment and the following variables: organizational support, transferability of skills, transferability of education, intrinsic and extrinsic rewards and respondents' age.

Statistically significant ($p < .05$), negative correlations exist between continuance commitment and the following variables: role conflict, availability of job alternatives, extrinsic financial rewards and education level.

The institution size variable was not significantly correlated with continuance commitment.

These correlations are consistent with expectation for three of the variables. Review of the literature (Meyer et al., 2002) suggests that as respondents' age increase, continuance commitment should also increase. Similarly, as respondents' availability of job alternatives and education level increase, continuance commitment should decrease.

The four exceptions to expectations were the correlations between organizational support, transferability of skills and education, role conflict and continuance commitment. Based on the literature (Meyer et al., 2002; Gormley, 2005), this author predicted that higher levels of organizational support, transferability of skills and education would negatively impact continuance commitment. However, this study showed these variables were positively associated with continuance commitment. The author also predicted that higher

levels of role conflict would positively impact continuance commitment. But again, this study showed that role conflict was negatively associated with continuance commitment.

There are few studies in the literature that specifically address correlations between rewards and continuance commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does continuance commitment. This is consistent with the literature (Mottaz, 1988; Coberly, 2004; Carlson, 2005) that reports commitment in general increases as intrinsic and extrinsic rewards increase. The current study also demonstrates that when extrinsic financial rewards increase, continuance commitment decreases.

Multicollinearity

Measures of association between the independent predictor variables were also examined for evidence of multicollinearity. Multicollinearity is defined as “a high degree of correlation among several independent variables” (Freund & Littell, 2000, p. 95). Multicollinearity within regression models often results when there is a large number of variables in the model. If multi-collinearity exists in a model, then the predicted variances for the independent variables and for the parameter estimates (i.e. regression coefficients) tend to be inflated (Freund & Littell, 2000).

Because interpretation of regression coefficients is essential to multiple regression analysis, it is desirable to detect multicollinearity. Table 14 shows there were no substantial correlations ($R > .9$) between predictors. In addition, tolerance values, variance inflation factors (VIF), eigenvalues, and condition indices were calculated (Appendix G) to provide more information about possible multicollinearities.

Tolerance estimates indicate the amount of variance in a given independent variable that is *not* explained by other independent variables in the analysis. Tolerance values less than 0.10, with large standard errors and small p values, may reflect multicollinearity. Of the variables evaluated, none met these criteria.

Value Inflation Factors (VIF) also indicate the amount of variance in a given independent variable. VIF values at or close to 1.0 suggest independence. A VIF greater than 1.0 indicates some degree of multicollinearity; moreover, VIF values above 10.0 are the most worrisome (Freund & Littell, 2000). Eight items exceeded that threshold: organizational support, status, and seven of the eight interaction terms. The interaction terms were intentionally created so their relationships do not reflect collinearity.

Wide variation in eigenvalues and eigenvalues close to 0.00 are evidence of multicollinearity. Eigenvalues in this study ranged from 0.00 to 7.22. Those items closest to 0.00 were the interaction terms whose intentional linear relationships do not necessarily reflect collinearity.

Finally, condition index values exceeding 15.0 indicate strong multicollinearity and values exceeding 30.00 indicate severe multicollinearity (Belsley, Kuh, & Welsch, 1980). Only a handful of items crossed this threshold, and they were the interaction term variables whose relationship was intentional. Altogether, statistics were within acceptable parameters for continuous variables, further ruling out concerns for multicollinearity.

Multiple Regression

The purpose of multiple regression is to understand the predictive relationship of the independent variables (X) on the dependent variable (Y). The regression model is mathematically expressed as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_k X_k + \text{error}$$

The α is the intercept -- it is where the regression line intercepts the y axis, representing the value of Y when all X variables are zero. The partial regression coefficient (b) represents the amount that Y changes when the corresponding X changes one unit, holding the other variables constant. The standardized regression coefficients or beta weights (β) are estimates of the relative contributions of the independent variables in the model. Standardization permits comparison between the X variables.

Creation of interaction terms

This study sought to explore the predictive value of 12 independent variables (X) for continuance commitment (Y), for both full-time and part-time community college faculty. In order to determine which independent variables were predictive for full-time faculty and for part-time faculty and in order to test if differences exist between the standardized regression coefficients (β) of full-time faculty and of part-time faculty, it was necessary to create an interaction term for each predictor variable (excluding demographic variables) and faculty employment status (e.g. orgsupport*status). Demographic variables were held as constants in the regression model and therefore creation of interaction terms was not necessary for them. Therefore, the final regression model included 12 independent variables and 8 interaction terms.

$$Y' = \beta_1(\text{org support}) + \beta_2(\text{role conflict}) + \beta_3(\text{avail job alternatives}) + \beta_4(\text{transfer skills}) + \beta_5(\text{trans education}) + \beta_6(\text{intrinsic rewards}) + \beta_7(\text{extrinsic rewards}) + \beta_8(\text{extrinsic financial rewards}) + \beta_9(\text{employment status}) + \beta_{10}(\text{degree}) + \beta_{11}(\text{institution size}) + \beta_{12}(\text{age}) + \beta_{13}(\text{org support} * \text{status}) + \beta_{14}(\text{role conflict} * \text{status}) + \beta_{15}(\text{avail job alternatives} * \text{status}) + \beta_{16}(\text{transfer skills} * \text{status}) + \beta_{17}(\text{trans education} * \text{status}) + \beta_{18}(\text{intrinsic rewards} * \text{status}) + \beta_{19}(\text{extrinsic rewards} * \text{status}) + \beta_{20}(\text{extrinsic financial rewards} * \text{status}) + \text{error}$$

Results

Using forced entry multiple regression, continuance commitment scores were then regressed on the linear combination of all predictor variables using the *proc reg* procedure in SAS. Beta values, standard errors, and standardized betas for the regression model utilized in this analysis are presented in Table 15. Significance of the regression model is evaluated through an *F* test statistic and its associated *p* value. Table 15 shows *F* (27.26) was significantly different from zero ($p < .0001$).

The R^2 value, or coefficient of determination, is used to estimate the overall goodness of fit. The R^2 value is interpreted as the amount of variance in *Y* explained collectively by all of the *X* variables. As R^2 approaches 1.0, the model begins to account for nearly all of the variability in the *Y*. The R^2 value obtained in Table 15 indicates the model accounts for 43% of the variance in continuance commitment. Additional regression model output can be found in Appendix H.

Organizational support, extrinsic rewards, degree attained, and age of respondent each made significant contributions to the variance in continuance commitment ($p < .05$). Although availability of job alternatives was not a significant contributor to the variance in continuance commitment, the variable did approach significance at $p = .07$.

Neither the predictor variable status nor any of the interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables and continuance commitment were the same for both full-time and part-time faculty.

Table 15

Multiple Regression of Continuance Commitment

Predictor	b	SE b	t Value	Pr > t	β
Org Support	0.33	0.11	2.91	0.00	0.28
Role Conflict	-0.07	0.09	-0.82	0.41	-0.07
Job alternatives	-0.11	0.06	-1.80	0.07	-0.12
Transfer Skills	-0.23	0.14	-1.66	0.10	-0.12
Transfer Education	0.03	0.09	0.29	0.77	0.02
Intrinsic Rewards	0.15	0.16	0.98	0.33	0.08
Extrinsic Rewards	0.37	0.12	3.13	0.00	0.27
Extrinsic Financial Rewards	-0.02	0.08	-0.24	0.81	-0.02
Status	-1.62	1.39	-1.16	0.24	-0.42
Degree	-0.29	0.06	-4.85	<.0001	-0.14
Size	-0.10	0.09	-1.09	0.28	-0.03
Age	0.01	0.00	3.19	0.00	0.09
Status*Orgsupport	0.17	0.13	1.35	0.18	0.26
Status*Rolconflict	0.09	0.09	0.96	0.34	0.12
Status*Alternative	0.11	0.07	1.53	0.13	0.13
Status*Skills	0.16	0.15	1.07	0.29	0.28
Status*Edu	0.05	0.10	0.54	0.59	0.09
Status*Intreward	-0.06	0.17	-0.34	0.73	-0.11
Status*Extreward	-0.08	0.13	-0.57	0.57	-0.12
Status*ExtFinReward	-0.07	0.09	-0.85	0.40	-0.11

Note. $R^2 = .43$ ($F[20, 711] = 27.26$), $p < .0001$ for predictor variables

In addition, the variables of role conflict, transferability of skills and education, intrinsic rewards, extrinsic financial rewards and size of institution did not contribute to the variance in continuance commitment.

Results of Research Question Four: Regression Analysis of Normative Commitment

The fourth research question addresses the predictive value of independent variables on normative commitment. Specifically, the fourth research question asks: what is the predictive value of organizational (organizational support, role conflict, role ambiguity, procedural justice), job alternatives/ transferability (availability of job alternatives, transferability of skills, transferability of education), rewards (intrinsic, extrinsic, extrinsic financial) and demographic (age, education level, institution size, organizational tenure) variables on *normative* commitment for full-time and for part-time community college faculty?

Bivariate Associations

The following section explores measures of association among and between the independent predictor variables and normative commitment. Measures of association are important because they reflect the strength of the relationship between the variables and they test the statistical significance of that relationship. Examination of the bivariate associations allows one to anticipate the influence of the variables in the final regression model. Table 16 displays the bivariate associations between variables for the normative commitment regression model. Table 16 indicates that moderate intercorrelations between organizational support and procedural justice ($r = 0.67$), between organizational support and role ambiguity ($r = 0.50$), and between respondents' length of employment (tenure) and age ($r = 0.40$). A closer review of the definitions of these variables reveals potential conceptual overlap. Specifically, an organization that is perceived as supportive presumably has delineated fair practices and procedures for faculty employees. Moreover, a supportive organization has

defined clear, non-ambiguous behavioral requirements for employees in their work role as faculty member. With respect to faculty length of employment (tenure), it is reasonable to conclude that employees' tenure at an organization increases as they grow older. Based on the review of variable definitions and evidence of moderate inter correlations among these variables, the potential for conceptual overlap is quite high. Therefore, procedural justice, role ambiguity, and length of employment were deleted from the regression model.

Table 16 also indicates that statistically significant ($p < .05$) positive correlations exist between normative commitment and the following variables: organizational support, availability of job alternatives, transferability of skills, intrinsic and extrinsic rewards and respondents' age.

Statistically significant ($p < .05$) negative correlations exist between normative commitment and the following variables: extrinsic financial rewards and education level. Role conflict, transferability of education, and institution size variables were not significantly correlated with normative commitment.

These correlations are consistent with expectation for five of the variables. Review of the literature (Meyer et al., 2002) suggested that as organizational support, transferability of skills and respondents' age increase, normative commitment should also increase. Similarly, as respondents' education levels increase, normative commitment should decrease.

Table 16

Bivariate Correlations and Cronbach's Alpha Estimates for Normative Commitment Regression Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	Normative Comm	Org Support	Proc Justice	Role Conflict	Role Amb	Job Altern	Trans Skills	Trans Edu	Int Reward	Ext Reward	Ext Fin Reward	Age	Degree	Tenure	Size	
1	(0.87)															
2	r=-0.14*	(0.91)														
3	r=0.16*	r=0.67*	(0.95)													
4	r=-0.03	r=-0.56*	r=-0.48*	(0.91)												
5	r=0.08*	r=0.50*	r=0.50*	r=-0.52*	(0.88)											
6	r=0.08*	r=-0.46*	r=-0.35*	r=0.36*	r=-0.35*	(0.85)										
7	r=0.10*	r=0.22*	r=0.24*	r=-0.15*	r=0.32*	r=-0.09*	(0.78)									
8	r=-0.04	r=0.20*	r=0.16*	r=-0.05*	r=0.23*	r=-0.21*	r=0.33*	(0.75)								
9	r=0.11*	r=0.33*	r=0.30*	r=-0.21*	r=0.40*	r=-0.20*	r=0.41*	r=0.26	(0.81)							
10	r=0.24*	r=0.60*	r=0.57*	r=-0.41*	r=0.49*	r=-0.33*	r=0.35*	r=0.28	r=0.54*	(0.83)						
11	r=-0.11*	r=-0.26*	r=-0.16*	r=0.12*	r=-0.11*	r=0.10*	r=-0.01	r=-0.02	r=-0.04	r=-0.22*	(0.74)					
12	r=0.08*	r=-0.03	r=-0.03	r=0.05	r=0.03	r=-0.02	r=0.05	r=0.01	r=0.05	r=-0.00	r=-0.08*	--				
13	r _s =-0.13*	r _s =-0.10*	r _s =-0.07	r _s =0.07*	r _s =-0.07*	r _s =0.13*	r _s =-0.05	r _s =0.07	r _s =-0.09*	r _s =-0.10*	r _s =0.10*	r _s =0.10*	--			
14	r _s =0.24*	r _s =-0.11*	r _s =-0.05	r _s =0.16*	r _s =0.00	r _s =-0.01	r _s =0.02	r _s =-0.06	r _s =0.03	r _s =0.00	r _s =0.03*	r _s =0.40*	Φ=0.15	--		
15	r _s =-0.03	r _s =0.05	r _s =0.12*	r _s =-0.03	r _s =0.01	r _s =-0.07	r _s =-0.04	r _s =0.03	r _s =0.01	r _s =0.02	r _s =-0.01	r _s =0.01	Φ=0.12	Φ=0.11	--	

Note. Reliability estimates appear in parentheses on the diagonal. *p < 0.05

The three exceptions to expectations were the correlations between availability of job alternatives and normative commitment. Based on the literature (Meyer et al., 2002), this author predicted that increased availability of job alternatives would negatively impact normative commitment. However, this study showed this variable was positively associated with normative commitment. The author also predicted that a higher level of education would positively impact normative commitment. But again, this study showed that more education was negatively associated with normative commitment.

There are few studies in the literature that specifically address correlations between rewards and normative commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does normative commitment. This is consistent with the literature (Mottaz, 1988; Coberly, 2004; Carlson, 2005) that reports commitment in general increases as intrinsic and extrinsic rewards increase. The current study also demonstrates that when extrinsic financial rewards increase, normative commitment decreases.

Multicollinearity

Measures of association between the independent predictor variables were also examined for evidence of multicollinearity. Multicollinearity is defined as “a high degree of correlation among several independent variables” (Freund & Littell, 2000, p. 95). Multicollinearity within regression models often results when there is a large number of variables in the model. If multi-collinearity exists in a model, then the predicted variances for the independent variables and for the parameter estimates (i.e. regression coefficients) tends to be inflated (Freund & Littell, 2000).

Because interpretation of regression coefficients is essential to multiple regression analysis, it is desirable to detect multicollinearity. Table 16 shows there were no substantial correlations ($R > .9$) between predictors. In addition, tolerance values, variance inflation factors (VIF), eigenvalues, and condition indices were calculated (Appendix G) to provide more information about possible multicollinearities.

Tolerance estimates indicate the amount of variance in a given independent variable that is *not* explained by other independent variables in the analysis. Tolerance values less than 0.10, with large standard errors and small p values, may reflect multicollinearity. Of the variables evaluated, none met these criteria.

Value Inflation Factors (VIF) also indicate the amount of variance in a given independent variable. VIF values at or close to 1.0 suggest independence. A VIF greater than 1.0 indicates some degree of multicollinearity; however, VIF values above 10.0 are the most worrisome (Freund & Littell, 2000). Eight items exceeded that threshold: organizational support, status, and seven of the eight interaction terms. The interaction terms were intentionally created and their relationship do not reflect collinearity.

Wide variation in eigenvalues and eigenvalues close to 0.00 are evidence of multicollinearity. Eigenvalues in this study ranged from 0.00 to 7.22. Those items closest to 0.00 were the interaction terms whose intentional linear relationships do not necessarily reflect collinearity.

Finally, condition index values exceeding 15.0 indicate strong multicollinearity and values exceeding 30.00 indicate severe multicollinearity (Belsley, Kuh, & Welsch, 1980). Only a handful of items crossed this threshold, and they were the interaction term variables

whose intentional relationship does not reflect collinearity. Altogether, statistics were within acceptable parameters for continuous variables, further ruling out concerns for multicollinearity.

Multiple Regression

The purpose of multiple regression is to understand the predictive relationship of the independent variables (X) on the dependent variable (Y). The regression model is mathematically expressed as:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \dots + \beta_k X_k + \text{error}$$

The α is the intercept -- it is where the regression line intercepts the y axis, representing the value of Y when all X variables are zero. The partial regression coefficient (b) represents the amount that Y changes when the corresponding X changes one unit, holding the other variables constant. The standardized regression coefficients or beta weights (β) are estimates of the relative contributions of the independent variables in the model. Standardization permits comparison between the X variables.

Creation of interaction terms

This study sought to explore the predictive value of 12 independent variables (X) for normative commitment (Y), for both full-time and part-time community college faculty. In order to determine which independent variables were predictive for full-time faculty and for part-time faculty and in order to test if differences exist between the standardized regression coefficients (β) of full-time faculty and of part-time faculty, it was necessary to create an interaction term for each predictor variable (excluding demographic variables) and faculty employment status (e.g. orgsupport*status). Demographic variables were held as constants

in the regression model and therefore creation of interaction terms was not necessary for them. Therefore, the final regression model included 12 independent variables and 8 interaction terms.

$$Y' = \beta_1(\text{org support}) + \beta_2(\text{role conflict}) + \beta_3(\text{avail job alternatives}) + \beta_4(\text{transfer skills}) + \beta_5(\text{trans education}) + \beta_6(\text{intrinsic rewards}) + \beta_7(\text{extrinsic rewards}) + \beta_8(\text{extrinsic financial rewards}) + \beta_9(\text{employment status}) + \beta_{10}(\text{degree}) + \beta_{11}(\text{institution size}) + \beta_{12}(\text{age}) + \beta_{13}(\text{org support*status}) + \beta_{14}(\text{role conflict*status}) + \beta_{15}(\text{avail job alternatives*status}) + \beta_{16}(\text{transfer skills*status}) + \beta_{17}(\text{trans education*status}) + \beta_{18}(\text{intrinsic rewards*status}) + \beta_{19}(\text{extrinsic rewards*status}) + \beta_{20}(\text{extrinsic financial rewards*status}) + \text{error}$$

Results

Using forced entry multiple regression, normative commitment scores were then regressed on the linear combination of all predictor variables using the *proc reg* procedure in SAS. Beta values, standard errors, and standardized betas for the regression model utilized in this analysis are presented in Table 17. Significance of the regression model is evaluated through an *F* test statistic and its associated *p* value. Table 17 shows *F* (7.82) was significantly different from zero ($p < .0001$).

The R^2 value, or coefficient of determination, is used to estimate the overall goodness of fit. The R^2 value is interpreted as the amount of variance in *Y* explained collectively by all of the *X* variables. As R^2 approaches 1.0, the model begins to account for nearly all of the variability in the *Y*. The R^2 value obtained in Table 17 indicates the model accounts for 18% of the variance in affective commitment.

Table 17

Multiple Regression of Normative Commitment

Predictor	b	SE b	t Value	Pr > t	β
Org Support	0.37	0.14	2.67	0.01	0.31
Role Conflict	0.20	0.10	1.92	0.06	0.20
Job alternatives	0.17	0.08	2.24	0.03	0.18
Transfer Skills	-0.23	0.17	-1.39	0.17	-0.12
Transfer Education	-0.11	0.11	-1.01	0.31	-0.09
Intrinsic Rewards	-0.03	0.19	-0.14	0.89	-0.01
Extrinsic Rewards	0.38	0.15	2.63	0.01	0.28
Extrinsic Financial Rewards	0.09	0.10	0.98	0.33	0.08
Status	1.93	1.70	1.13	0.26	0.50
Degree	-0.23	0.07	-3.23	0.00	-0.11
Size	-0.10	0.11	-0.89	0.38	-0.03
Age	0.01	0.01	2.49	0.01	0.09
Status*Orgsupport	-0.24	0.15	-1.57	0.12	-0.37
Status*Rolconflict	-0.19	0.12	-1.67	0.10	-0.25
Status*Alternative	0.01	0.09	0.16	0.88	0.02
Status*Skills	0.32	0.19	1.73	0.08	0.55
Status*Edu	-0.01	0.12	-0.08	0.94	-0.02
Status*Intreward	-0.01	0.21	-0.05	0.96	-0.02
Status*Extreward	-0.08	0.17	-0.47	0.64	-0.12
Status*ExtFinReward	-0.16	0.11	-1.53	0.13	-0.24

Note. $R^2 = .18$ ($F[20, 710] = 7.82$), $p < .0001$ for predictor variables

Organizational support, availability of job alternatives, extrinsic rewards, degree attained and age of respondent each made significant contributions to the variance in normative commitment ($p < .05$). Although role conflict was not a significant contributor to the variance in normative commitment, the variable did approach significance at $p = .06$.

Neither the predictor variable status nor any of the interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables and normative commitment were the same for both full-time and part-time faculty.

In addition, the variables of role conflict, transferability of skills and education, intrinsic rewards, extrinsic financial rewards and size of institution did not contribute to the variance in normative commitment.

Summary of Regression Models

The above regression analyses provide a better understanding of the variables that influence affective, continuance, and normative commitment for North Carolina community college faculty.

The second research question of this study explored the predictive value of the independent variables on affective commitment. The results indicated that organizational support, extrinsic rewards, extrinsic financial rewards and respondents' level of education, size of institution and age accounted for 61% of the variance in affective commitment.

The interaction term of extrinsic financial rewards*status was also a significant ($p = .05$) contributor to the regression model, suggesting that the contribution of extrinsic financial rewards to affective commitment is different for the faculty groups. Subsequent F-test analysis confirmed this observation by illustrating that as extrinsic financial rewards increase, affective commitment decreases for part-time faculty. At the same time, these analyses show that as extrinsic financial rewards increase for full-time faculty, affective commitment remains uninfluenced.

Although role conflict, availability of job alternatives, transferability of skills, intrinsic rewards and education did correlate with affective commitment, their inclusion in the regression model did not contribute to the total variance associated with affective

commitment. It should be noted that intrinsic rewards nearly reached significance ($p = .07$) as a contributor to the regression model.

Altogether, these results suggest that organizational support, extrinsic rewards, respondents' level of education, size of institution and age are antecedents for affective commitment. In addition, extrinsic financial rewards may be an antecedent particular to part-time faculty for affective commitment.

The third research question examined the predictive value of the independent variables on continuance commitment. The results indicated that organizational support, extrinsic rewards, and respondents' level of education and age accounted for 43% of the variance in continuance commitment. Neither the predictor variable status itself nor the predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between predictor variables and continuance commitment were the same for both full-time and part-time faculty.

Although role conflict, availability of job alternatives, transferability of skills and education, intrinsic rewards, extrinsic financial rewards and institution size did correlate with continuance commitment, their inclusion in the regression model did not contribute to the total variance associated with continuance commitment. It should be noted that availability of job alternatives nearly reached significance ($p = .07$) as a contributor to the regression model.

Altogether, these results suggest that organizational support, extrinsic rewards, respondents' level of education and age are antecedents for continuance commitment.

For the fourth research question, the predictive value of the independent variables on normative commitment was examined. The variables of organizational support, availability

of job alternatives, extrinsic rewards and respondents' level of education and age accounted for 18% of the total variance in normative commitment. Neither the predictor variable status itself nor the predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means the relationships between predictor variables and normative commitment were the same for both full-time and part-time faculty.

Although transferability of skills, intrinsic rewards, extrinsic financial rewards and respondents' institutional size correlated with normative commitment, they did not contribute to the total variance of normative commitment. It should be noted that role conflict nearly reached significance ($p = .06$) as a contributor to the regression model.

Altogether, these results suggest that organizational support, availability of job alternatives, extrinsic rewards and respondents' level of education and age are antecedents for normative commitment.

Clearly, the variables of organizational support, extrinsic rewards and respondents' level of education and age have a significant influence on all three components of commitment. Based on review of the beta coefficients, the influence of organizational support and extrinsic rewards appears to be stronger on affective commitment than on continuance or normative commitments. Also, the influence of respondents' level of education and age appear to be nearly equivalent across the three components of commitment.

In addition, the respondents' institutional size had a significant influence on only affective commitment. The availability of job alternatives variable had a significant influence only on normative commitment.

Chapter Summary

The study has defined the demographic profile of this sample of North Carolina community college faculty. Both full-time and part-time faculty survey respondents averaged in their late forties and have similar educational backgrounds in that a majority had earned a Master's degree and are affiliated with similar-sized institutions. A larger percentage of full-time faculty has worked longer in their organization than their part-time counterparts.

The results of this study indicate that North Carolina community college faculty generally exhibit moderately high levels of affective and continuance commitment to their organization. In other words, they stay with the community college where they are employed because they want to stay there and because they feel they do not have job alternatives. Moreover, the faculty generally display lower levels of normative commitment, the feeling that they owe something to the organization.

This study found a positive correlation exists between each of the three components of organizational commitment within the sample population. These results indicate that North Carolina community college have generally developed an emotional attachment to their organization (affective commitment). This attachment is associated with two concurrent outcomes. The first is that faculty have an increased perception of costs associated with leaving the organization (continuance commitment). The second is the faculty's obligation to the organization increases as well (normative commitment).

This study also provided a better understanding of the different commitment levels between full-time and part-time faculty. Full-time faculty were significantly more affectively

and normatively committed than part-time faculty, even though the effect size of this significance was small to medium. These results indicate that full-time faculty have a stronger emotional attachment and an increased obligation to their organizations than part-time faculty.

With one exception, regression analyses showed that all predictors for organizational commitment are the same for all community college faculty in North Carolina, regardless of full-time or part-time employment status. The one exception was the contribution of extrinsic financial rewards to affective commitment. Regression analysis of affective commitment showed the contribution of extrinsic financial rewards is different for the faculty groups. Results from this model show that as extrinsic financial rewards increase, affective commitment decreases for part-time faculty. At the same time, the model shows that as extrinsic financial rewards increase for full-time faculty, affective commitment remains uninfluenced.

Analysis further illustrated that organizational support, extrinsic rewards, respondents' level of education and age are antecedents of all three components of commitment. In addition to these four variables, the respondents' institutional size had a significant influence on only affective commitment. The availability of job alternatives variable had a significant influence only on normative commitment.

There was little support for the inclusion of other factors, namely transferability of skills and education, in the conceptual framework related to any of the components of organizational commitment.

CHAPTER FIVE: CONCLUSION, DISCUSSION AND RECOMMENDATIONS

Introduction

The intention of this dissertation was to compare organizational commitment levels between full-time and part-time faculty employed at North Carolina community colleges and to explore the factors that may predict their commitment levels. To contextualize these results, the chapter will focus on the conclusions and implications drawn from the analysis of the research findings and compare them with existing research on organizational commitment among higher education faculty. Finally, the results are applied to a discussion of opportunities for future research and application to practice.

Conclusions and Discussion

Affective Commitment

Meyer and Allen (1991) define affective commitment as “the employee’s emotional attachment to, identification with, and involvement in the organization” (p. 67). This is generally seen as a favorable form of commitment, meaning that the individual stays with the organization because they want to stay. The results of this study produced a mean of 5.12 ($SD = 1.53$), just within the response anchor range for “slightly agree” (5.00 –5.99) on the seven point scale.

This level of affective commitment is generally in accordance with other studies that have utilized the Affective Commitment Scale in the higher education setting. Messer (2006) reported a mean score of affective commitment for Tulsa Community College faculty at 5.23 ($SD = 1.33$). Carver (2008) reported that a national sample of nursing faculty produced a mean score of 4.41 ($SD = 1.22$) for affective commitment. This study’s reported level of

commitment, however, is slightly higher than the reported mean score of affective commitment for Christian higher education faculty at 3.11 ($SD = 1.12$) on a 5-point scale (Thomas 2008).

Examination of affective commitment by faculty status shows that full-time faculty reported a mean level of affective commitment of 5.24 ($SD = 1.47$). Yet, the part-time faculty reported a mean level of affective commitment of 4.64 ($SD = 1.61$). Statistical analysis showed the mean levels of affective commitment between full-time and part-time faculty were significantly different ($p < .05$), though the effect size was small (effect-size $r = 0.19$).

The research literature is non-existent for Meyer and Allen's conceptualization of organizational commitment modeled for full-time and part-time community college faculty. Therefore, a direct comparison of findings from the current study with findings from the literature is not possible. Yet, when comparisons are made with the few extant studies of organizational commitment among higher education faculty, the results of the current study do not match them. Speier-Bowman (1995), incorporating Mottaz's conceptualization of organizational commitment, showed that overall commitment levels were not different between full-time and part-time faculty at Denver area community colleges. Borchers & Teahen (2001), using Mowday's (1979) instrument for organizational commitment, reported no difference in commitment levels between full-time and part-time faculty at two Mid-western universities. Murphy (2009), using years of institutional service as a single-item proxy for institutional commitment, reported full-time tenured/tenure track faculty have more years of service than part-time (contingent) faculty. This difference was explained as a by-

product of the tenure structure and process itself. However, Murphy (2009) further indicated that part-time faculty were generally as committed as their tenured/tenure-track counterparts since both groups had an average of seven years of service.

The current study has shown that full-time faculty may be more affectively committed than their part-time counterparts. One possible reason for this could be due to the fact that part-time faculty may have not been in the organization long enough to develop affective attachment. Lower levels of attachment may be a result of poor socialization to the college as opposed to actual time in employment. It is common for part-time faculty to teach sections of classes that are scheduled in the evening, after most full-time faculty have finished their work day. As a result, part-time faculty may not feel integrated and included in the cultural fabric of the college. Effective socialization is also related to organizational support. It teaches the part-time faculty member the skills of his/her job as well as the norms and values or culture that guide faculty behavior at the particular institution in order to enhance employee performance (Anakwe & Greenhaus, 1999). When the socialization process is institutionalized and made effective, some researchers believe it increases organizational commitment (Wanous, 1992). Community colleges should pay more attention to how departments mentor new faculty members and to avenues for faculty development. These areas reflect ways that institutions can integrate all faculty into the organization. Integration might increase the perception of a supportive work environment, thereby increasing affective commitment.

Research Question 2: Predicting Affective Commitment

Additional insight into understanding how faculty develop affective commitment is provided by studying its potential antecedents. The second research question examined the influence of organizational, job alternatives/ transferability, rewards and demographic variables on affective commitment. Correlation analysis provided evidence of a relationship between the independent variables with affective commitment. The subsequent regression analysis provided evidence to determine the predictive value of these independent variables.

Results of the regression analysis showed the combined predictive value of the independent variables accounted for 61% of the variance in affective commitment, with the F test statistic significantly ($p < .05$) less than zero. Except for extrinsic financial rewards, none of the other predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables (excluding extrinsic financial rewards) and affective commitment were the same for both full-time and part-time faculty. With this finding as a backdrop, the following paragraphs will discuss the influence of the predictor variables on affective commitment.

Organizational Variables

The results of the correlation study found that statistically significant ($p < .05$) positive correlations exist between affective commitment and organizational support. Statistically significant ($p < .05$), negative correlations exist between affective commitment and role conflict. These correlations are consistent with expectations. Meyer and associates (2002) show that as organizational support increases, affective commitment also increases. Similarly, as role conflict increases, affective commitment decreases.

Subsequent regression analysis indicated that organizational support may have the best predictive value for affective commitment. The standardized beta coefficient of $\beta = 0.35$ was larger than those of the other model predictors. Developed by Eisenberger, Huntington, Hutchison and Sowa (1986), the perceived organizational support (POS) construct is defined as an employee's "global beliefs about the extent to which [their] organization cares about their well-being and to which it values their contributions" (Fuller et al., 2006, p. 328). As such, the POS construct provides a framework for understanding how employees become affectively committed to their organizations (Hutchison, 1997).

The process of commitment development via organizational support, as framed by Eisenberger and associates (1986), was founded in the social exchange approach. In this framework, an employee's effort and loyalty are traded for material and social rewards offered by the organization (Hutchison, 1997). This behavior becomes reciprocal, as the organization will provide more support when the employee completes work in fulfillment of organizational goals (Shore & Shore, 1995). Supportive organizations thereby increase an employee's positive attitude and commitment level.

Regression analysis also showed that role conflict was not a significant predictor of affective commitment. This makes sense, for if faculty feel frustrated with the contradictory demands from their work, then their attachment to the organization would not be evident. A consequence of reduced affective attachment might be poor performance on the job, as perceived by the faculty members themselves or by the institution. A college that does not take steps to ameliorate role conflict and allows faculty to work with incompatible expectations may be perceived as unsupportive of its faculty (Meyer and Allen, 1997).

Job Alternatives/Transferability Variables

The results of the correlation study found that statistically significant ($p < .05$) positive correlations exist between affective commitment and transferability of skills and education. Statistically significant ($p < .05$) negative correlations exist between affective commitment and availability of job alternatives. These correlations are inconsistent with expectations. Meyer and associates (2002) show that as transferability of skills increases, affective commitment should increase. Similarly, as availability of job alternatives and transferability of education increases, affective commitment should decrease. It is unclear how to resolve this inconsistency in the correlation analysis. If faculty feel they have many job alternatives and that their skills and education would be more useful to other institutions, it is logical to predict that their affective attachment to the institution would be undermined.

Resolution of the correlation inconsistency may not be worth debating given the results of the subsequent regression analysis. The regression models indicated that none of these variables have predictive value for normative commitment.

Rewards Variables

There are few studies in the literature that specifically address correlations between rewards and affective commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does affective commitment. This is consistent with the literature (Carlson, 2005; Coberly, 2004; Mottaz, 1988) that reports commitment in general increases as intrinsic and extrinsic rewards increase.

Regression analysis in this study indicated that, compared to organizational support, extrinsic rewards may have an equivalent predictive value ($\beta = 0.34$) for affective

commitment. Extrinsic rewards included non-financial recognition faculty receive for the work they do and the respect gained by working with their colleagues. This is consistent with the findings of Murphy (2009) who reported that measures of peer recognition for teaching contributions by contingent faculty correlated positively to commitment.

Fuller, Hester, Barnett and Relyea (2006) studied how recognition of faculty accomplishments to internal and external constituencies promoted the perceived external prestige (PEP) of the organization. Through the promotion of PEP, Fuller and associates demonstrated that human resource strategies, developed specifically to recognize and communicate faculty accomplishments, increase their faculty's affective attachment to the organization. Community colleges might therefore consider these findings and work to develop ways to increase faculty recognition. This could be accomplished via both informal methods (during conversation) and formal methods (such as awards, certifications, college literature).

In the current study, extrinsic rewards also included opportunities for professional development. Professional development refers to skills and knowledge attained for personal growth and potential career advancement. Professional development encompasses various types of learning opportunities, ranging from formal coursework and conferences to informal learning opportunities while working with mentors. The finding that professional development is predictive of affective commitment is consistent with L. G. Sullivan (personal communication, April 2, 2010) and Wallin (2007) who indicate that institutional funding to attend regional and national conferences is particularly valued by full-time and part-time faculty.

Regression analysis also indicated that extrinsic financial rewards have a significant *negative* effect on affective commitment. The more interesting outcome is this effect is reversed when the model takes into account full-time status – with full-time status in account, extrinsic financial rewards then have a significant *positive* effect on affective commitment. Results of the beta coefficient analysis showed that as extrinsic financial rewards increase for part-time faculty, affective commitment decreases. At the same time, the analysis showed that as extrinsic financial rewards increase for full-time faculty, affective commitment remains uninfluenced.

One explanation for this result may be that since the ceiling of the salary range is low, there are nearly negligible opportunities for promotion for part-time faculty. Since these examples of extrinsic financial rewards are nearly non-existent for part-time faculty, then they cannot be the motivating factors to do the work of teaching. From this perspective, it makes sense that extrinsic financial rewards would negatively influence their emotional attachment to the organization. Moreover, this finding is accordance with Murphy (2009) and Carlson (2005) and Coberly (2005). All of these studies report financial rewards to be uncorrelated or unproductive of organizational commitment for part-time faculty.

Correlation analyses showed significant positive correlations between intrinsic rewards and affective commitment. Regression analysis also showed that intrinsic rewards did not have a statistically significant effect on affective commitment at the $p < .05$ threshold. Yet, intrinsic rewards did approach significance with a p -value = .07. It was quite surprising that regression analyses in the current study did not reveal intrinsic rewards as significant positive predictor for this component of organizational commitment. This outcome is in

contrast to studies (Carlson, 2005; Coberly, 2005) that have reported intrinsic rewards as an antecedent to organizational commitment. Coberly's (2005) path analysis study reported "intrinsic rewards had a significant direct effect on [organizational] commitment and a significant mediating effect through [job] satisfaction" (p. 86).

One reason for this may be that the intrinsic rewards construct within the current study consisted of only two items. It is generally recommended that constructs of interest consist of at least three items (Hatcher, 1994). Prior to exploratory factor analysis of the rewards variables, the intrinsic rewards originally consisted of four items that had been proven valid in another study of faculty commitment (Coberly, 2005). So, it was intended that intrinsic rewards be a robust predictor of affective commitment in this study. However, the factor loadings resulting from exploratory factors analysis (EFA) produced a two-item construct for intrinsic rewards. This two-item measure for intrinsic rewards was limiting. Future studies of intrinsic rewards and organizational commitment should consider utilizing Mottaz' (1981, 1988) scales of task autonomy, task significance and task involvement to measure intrinsic rewards.

Demographic Variables

In general, demographic variables were used as controls in this study. The results of the correlation analysis found that statistically significant ($p < .05$) positive correlations exist between affective commitment and respondents' age. Statistically significant ($p < .05$) negative correlations exist between affective commitment and respondents' education level. These correlations are consistent with expectations. Studies (Meyer et al., 2002; Taylor 2005; Teahen, 2000) show that as respondents' age increases, affective commitment also

increases. Similarly, as respondents' education level increases, affective commitment should decrease. The variable of institution size was the only one that was not significantly correlated with affective commitment.

Subsequent regression analysis showed that age was a significant positive predictor of affective commitment, while respondents' educational level and institutional size were significant negative predictors of commitment. One reason age may predict affective commitment is that older employees may have more positive work experiences than younger employees (Meyer and Allen, 1997). Nevertheless, this observation could be confounded by the influence of generational characteristics for individual faculty. Smola and Sutton (2002) suggested that work values of generational cohorts have changed over time. Younger employees may be more apt to change jobs as this has become more socially acceptable for them in recent years.

The contribution of respondents' education level and institution size are relatively weak compared to the other significant predictors included in the model. Meyer and Allen (1997) concede that education level as an antecedent to affective commitment is difficult to interpret due to its susceptibility to moderation by other variables. The finding that institution size is a negative influence on affective commitment is somewhat intuitive. Individual faculty may feel less of an emotional attachment to colleges that employ large numbers of employees. A supportive and rewarding work environment may be diluted at large-sized institutions simply due to economies of scale. Conversely, individual faculty may feel more of an emotional attachment to colleges that employ small numbers of employees.

A supportive and rewarding work environment may be amplified where faculty feel they part of a close-knit team or a family of faculty.

Continuance Commitment

Continuance commitment is defined as the employee's "awareness of the costs associated with leaving the organization" (Meyer & Allen, 1996, p. 67). A person who stays with an organization because they "need" to or feel they have no job alternatives demonstrates continuance commitment. The results of this study presented an overall mean score of 4.47 ($SD = 1.57$), which lies squarely within the response anchor range for "Neither agree nor disagree" (4.00 –4.99) on the seven point scale. Thus, North Carolina community college faculty would neither agree nor disagree with the statement "I stay in my organization because I need to."

This level of commitment is higher in comparison to Carver's (2008) study of nursing faculty that produced a mean score of 2.70 ($SD = 1.12$) for continuance commitment; it is in accordance with Thomas' (2008) reported mean score of continuance commitment for Christian higher education faculty at 3.10 ($SD = 0.72$) on a 5-point scale.

Examination of continuance commitment by faculty status shows that full-time faculty reported a mean level of continuance commitment of 4.52 ($SD = 1.53$), which was higher than the overall mean level of continuance commitment for all faculty in this study. Yet, the part-time faculty reported a mean level of continuance commitment of 4.28 ($SD = 1.52$). Statistical analysis showed the mean levels of continuance commitment between full-time and part-time faculty were significantly different ($p < .05$), though the effect size very small (effect-size $r = 0.08$).

As noted earlier, the research literature is non-existent for Meyer and Allen's conceptualization of organizational commitment modeled for full-time and part-time community college faculty. Therefore, a direct comparison of findings from the current study with findings from the literature is not possible. Yet, when comparisons are made with the few extant studies of organizational commitment among higher education faculty, the results of the current study do not match them. Several studies have reported no difference in commitment levels between full-time and part-time faculty (Borchers & Teahen, 2001; Murphy, 2009; Speier-Bowman, 1995).

The current study has shown that full-time faculty may have more continuance commitment than their part-time counterparts. This means that full-time faculty are more aware of the costs associated with leaving the organization. Costs involve the loss of an employee's investment of time, money or effort in the organization. It is posited in this study that continuance commitment develops as a result of decreased employment job alternatives. Written another way, employees who believe they have options for moving to a different job will have weaker continuance commitment than those who believe they have few job alternatives (Meyer and Allen, 1997). So part-time faculty, who often work elsewhere to amass a base salary, may feel they have viable job alternatives for working at another organization.

Many North Carolina community colleges are located rural areas and therefore are geographically isolated from other colleges or companies that may offer job alternatives to faculty. As a result, there exists a lack of employment opportunities for faculty who may wish to move to a job outside their current college. The current study attempted to indirectly

address this issue by including the variable of institutional size in correlation and regression analyses. The small-sized community colleges in North Carolina tend to be the ones that are rural and geographically isolated, offering few opportunities for alternative employment.

Research Question 3: Predicting Continuance Commitment

Additional insight into understanding how faculty develop continuance commitment is provided by studying its potential antecedents. The third research question examined the influence of organizational, job alternatives/ transferability, rewards and demographic variables on continuance commitment. Correlation analysis provided evidence of a relationship between several independent variables with continuance commitment. The subsequent regression analysis provided evidence to determine the predictive value of these independent variables.

Results of the regression analysis showed the combined predictive value of the independent variables accounted for 43% of the variance in continuance commitment, with the F test statistic significantly ($p < .05$) less than zero. None of the predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables and continuance commitment were the same for both full-time and part-time faculty. With this finding as a backdrop, the following paragraphs will discuss the influence of the predictor variables on continuance commitment.

Organizational Variables

The results of the correlation study found that statistically significant ($p < .05$) positive correlations exist between continuance commitment and organizational support. This correlation is consistent with expectation. Statistically significant ($p < .05$) negative

correlations exist between continuance commitment and role conflict. Both correlations with continuance commitment found in this study were in contrast to what was expected. Meyer and associates (2002) show that higher levels of organizational support would decrease continuance commitment, while higher levels of role conflict would increase it.

Subsequent regression analysis indicated that organizational support may have the best predictive value for continuance commitment. The standardized beta coefficient of $\beta=0.28$ was larger than those of the other model predictors. This is a surprising result. Organizational support, as described earlier, is critical in developing an employee's emotional attachment to the organization. So it is somewhat contradictory that it would also be predictive for an employee's belief that he/she *needs to* or *has to* stay in the organization.

One possible explanation for this is that organizational support provides a nurturing environment for employees such that the cost of leaving is too high. Meyer and Allen (1997) point out that "continuance commitment can develop as a result of any action or event that increases the cost of leaving the organization" (p. 56). Effective organization support may include promotion or a raise in salary, particularly for full-time faculty. These are examples of events that may increase the cost associated with leaving. This increased cost may then trigger an increase in continuance commitment.

Regression analysis also showed that role conflict was not a significant predictor of commitment. This makes sense, for if faculty feel frustrated with the contradictory demands from their work, then their costs associated with leaving the organization would be minimal.

Job Alternatives/Transferability Variables

The results of the correlation study found that statistically significant ($p < .05$) positive correlations exist between continuance commitment and transferability of skills and education. These correlations are inconsistent with expectations. Meyer and associates (2002) show that as transferability of skills and education increase, continuance commitment should decrease. A statistically significant ($p < .05$) negative correlation exists between continuance commitment and availability of job alternatives. This correlation is consistent with expectation, as Meyer and associates (2002) show that as availability of job alternatives increases, continuance commitment should decrease.

Subsequent regression analysis indicated that transferability of skills and transferability of education do not have significant predictive value for continuance commitment. This is a surprising outcome. If employees feel their skills and education are marketable to other institutions, then they might perceive potential for employment elsewhere. One would therefore predict that continuance commitment would be influenced by this potential.

Another surprising outcome of the regression analysis was that availability of job alternatives was not a significant predictor of organizational commitment at the $p < .05$ threshold. Yet, it is important to note this variable nearly reached significance, with $p = .07$. As discussed earlier, the availability of employment job alternatives lessens the cost associated with leaving the organization. Continuance commitment would be influenced by this reduced cost.

Rewards Variables

There are few studies in the literature that specifically address correlations between rewards and continuance commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does continuance commitment. This is consistent with the literature (Carlson, 2005; Coberly, 2004; Mottaz, 1988) that reports commitment in general increases as intrinsic and extrinsic rewards increase. The current study also demonstrates that when extrinsic financial rewards increase, continuance commitment decreases.

Regression analysis indicated that, compared to organizational support, extrinsic rewards may have an equivalent predictive value ($\beta = 0.27$) for continuance commitment. Extrinsic rewards, as described earlier, are critical in developing an employee's emotional attachment to the organization. So, it is somewhat contradictory that it would also be predictive for an employee's belief that he/she *needs* to stay in the organization.

One possible explanation for this is that extrinsic rewards, including peer recognition and spirit of collegiality, provide such a comfortable environment for employees that the emotional cost of leaving is too high. The investment of developing working relationships with colleagues, learning the institutional culture and building familiarity with institutional practices may be wasted if the faculty member were to leave. Therefore, continuance commitment would be positively influenced by extrinsic rewards.

Demographic Variables

In general, demographic variables were used as controls in this study. The results of the correlation analysis found that a statistically significant ($p < .05$) positive correlation exists between continuance commitment and respondents' age. A statistically significant ($p <$

.05) negative correlation exists between continuance commitment and respondents' education level. These correlations are consistent with expectations. Meyer and colleagues (2002) have shown that as respondents' age increases, continuance commitment also increases. Similarly, as respondents' education level increases, continuance commitment should decrease.

Subsequent regression analysis showed that age was a significant positive predictor of continuance commitment. This finding is somewhat counterintuitive. As discussed earlier, younger employees may be more apt to change jobs, while older employees tend to remain in their jobs. Therefore, it would be reasonable to predict that age would have been a negative influence on continuance commitment – that older employees would potentially be working where they 'want' to work, not where they 'have' to work, as is suggested by continuance commitment. Even so, one explanation for why older faculty may have higher continuance commitment may be that they are more settled in the community and their family members may be reluctant to move elsewhere (Sullivan, 2010).

Regression analysis also showed respondents' educational level was a significant negative predictor of commitment. This outcome makes sense. It is reasonable to imagine that faculty who have earned higher degrees may also have increased availability of job alternatives. In fact, correlation analysis between education level and availability of job alternatives in the current study bear this out. Faculty teaching at community colleges may simultaneously be working to earn their doctorate degrees. After graduation, they may be recruited to other institutions of higher education, often at higher salaries as compensation for their educational attainment. So, the costs associated with leaving the organization decrease, thereby decreasing continuance commitment.

It is also reasonable to imagine that faculty who have earned higher degrees might make an internal move into administrative positions within their college. This move is not considered a job alternative in this study, as the job alternative variable was delimited to alternatives outside the faculty member's current college. Moreover, an internal move to an administrative position might be considered a promotion. Opportunities for promotion are reflected in this study as extrinsic rewards.

Regression analysis also showed that institutional size was not a significant predictor of continuance commitment. This non-significant result suggests that neither small-sized institutions that tend to be geographically isolated in rural areas nor the large-sized institutions that tend to be located in populous metropolitan areas have influence on continuance commitment.

Normative Commitment

A high level of normative commitment indicates that the employee feels a sense of obligation to the organization for reasons of loyalty or believing the organization has invested highly in them; this commitment would be reflected in the belief that the employee "ought" to remain with the organization (Meyer & Allen, 1991). The results of this study presented an overall mean score of 3.81 ($SD = 1.19$), which lies within the response anchor range for "slightly disagree" (3.00 – 3.99) on the seven point scale. Therefore, North Carolina community college faculty mildly disagree with the statement "I stay in my organization because I need to." This indicates that there is not a strong feeling of obligation to the organization.

This level of commitment is in accordance with Carver's (2008) study of nursing faculty that produced a mean score of 3.78 ($SD = 1.17$) for normative commitment; but it is lower than Thomas' (2008) reported a mean score of normative commitment for Christian higher education faculty at 2.96 ($SD = 1.05$) on a 5-point scale.

When normative commitment was examined by faculty status, full-time faculty reported a mean level of normative commitment of 4.00 ($SD = 1.53$). In contrast, the part-time faculty reported a mean level of normative commitment of 3.07 ($SD = 1.51$). Statistical analysis showed the mean levels of normative commitment between full-time and part-time faculty were significantly different ($p < .05$), though the effect size was medium (effect-size $r = 0.29$).

As noted earlier, the research literature is non-existent for Meyer and Allen's (1991) conceptualization of organizational commitment modeled for full-time and part-time community college faculty. Therefore, a direct comparison of findings from the current study with findings from the literature is not possible. On the other hand, when comparisons are made with the few extant studies of organizational commitment among higher education faculty, the results of the current study do not match them. Several studies have reported no difference in commitment levels between full-time and part-time faculty (Borchers & Teahen, 2001; Murphy, 2009; Speier-Bowman, 1995).

Normative commitment is a measure of moral obligation, or loyalty, to the organization. The mean score for normative commitment was significantly higher for full-time faculty than for part-time faculty. This finding could indicate that full-time faculty are more loyal to the organization and that part-time employees have less guilty feelings about

leaving an organization than their full-time counterparts. Carver (2008) demonstrated that normative commitment may vary with generations of nursing faculty. Hartmann and Bambacas (2000) reported low levels of normative commitment in their Australian study of part-time, academic staff workers. They concluded that changing jobs is more acceptable than it has been in past years.

Research Question 4: Predicting Normative Commitment

Additional insight into understanding how faculty develop normative commitment is provided by studying its potential antecedents. The final research question examined the influence of organizational, job alternatives/ transferability, rewards and demographic variables on normative commitment. Correlation analysis provided evidence of a relationship between the independent variables with normative commitment. The subsequent regression analysis provided evidence to determine the predictive value of these independent variables.

Results of the regression analysis showed the combined predictive value of the independent variables accounted for 18% of the variance in normative commitment, with the F test statistic significantly ($p < .05$) less than zero. None of the predictor*status interaction terms significantly ($p < .05$) contributed to the regression model. This means that the relationships between the predictor variables and normative commitment were the same for both full-time and part-time faculty. With this finding as a backdrop, the following paragraphs will discuss the influence of the predictor variables on normative commitment.

Organizational Variables

The results of the correlation study found that a statistically significant ($p < .05$) positive correlation exists between normative commitment and organizational support. This

correlation is consistent with expectation. Meyer and associates (2002) show that as organizational support increases, affective commitment also increases. Further results did not show a statistically significant ($p < .05$) correlation between normative commitment and role conflict.

Subsequent regression analysis indicated that organizational support may have the best predictive value for normative commitment. The standardized beta coefficient of $\beta = 0.31$ was larger than those of the other model predictors. This result is similar to the results of the regression models for affective commitment. Meyer and Allen (1997) have noted on the basis of several studies that work experiences associated with supportiveness are predictive of both affective and normative commitment. The reason for this may be that some positive work experiences, such as organizational support, “influence feelings of emotional attachment and feelings of obligation at the same time” (Meyer and Allen, 1997, p. 63).

Regression analysis also showed that role conflict was not a significant predictor of normative commitment at the $p < .05$ threshold. Yet, role conflict as a positive predictor of normative commitment approached significance, with $p = .06$. It is difficult to reconcile this finding. If faculty feel frustrated with the contradictory demands in their work role, it would seem logical that their loyalty to the organization would be decreased, not increased, as the regression model suggests.

Job Alternatives/Transferability Variables

The results of the correlation study found that a statistically significant ($p < .05$) positive correlation exists between normative commitment and availability of job alternatives. This is inconsistent with the literature. Meyer and associates (2002) show that

as availability of job alternatives increases, normative commitment should increase. The current study also shows that a statistically significant ($p < .05$) positive correlation exists between normative commitment and transferability of skills. This is consistent with the literature, as Meyer and associates (2002) show an increase in normative commitment as transferability of skills increases. Further results in the current study did not show a statistically significant ($p < .05$) correlation between normative commitment and transferability of education.

As was the case for affective commitment, it is unclear how to resolve this inconsistency in the correlation analysis. If faculty feel they have many job alternatives and that their skills and education would be more useful to other institutions, it is logical to predict that their normative attachment to the institution would be undermined. On the other hand, if the college supported further education and gain of skills, one might feel indebted to the college.

Resolution of the correlation inconsistency may not be worth debating given the results of the subsequent regression analysis. The regression models indicated that none of these variables have predictive value for normative commitment.

Rewards Variables

There are few studies in the literature that specifically address correlations between rewards and normative commitment. This study is one of the first to show that as intrinsic and extrinsic rewards increase, so does affective commitment. This is consistent with the literature (Carlson, 2005; Coberly, 2004; Mottaz, 1988) that reports commitment in general increases as intrinsic and extrinsic rewards increase.

Regression analysis in this study indicated that, compared to organizational support, extrinsic rewards may have an equivalent predictive value ($\beta= 0.28$) for normative commitment. Extrinsic rewards included non-financial recognition faculty receive for the work they do and the respect gained by working with their colleagues. Again, this result is similar to the results of the regression model for affective commitment. The reason for this may be that some positive work experiences, such as extrinsic rewards, “influence feelings of emotional attachment and feelings of obligation at the same time” (Meyer and Allen, 1997, p. 63).

Demographic Variables

In general, demographic variables were used as controls in this study. The results of the correlation analysis found that statistically significant ($p < .05$) positive correlations exist between normative commitment and respondents' age. Statistically significant ($p < .05$) negative correlations exist between normative commitment and respondents' education level. These correlations are consistent with expectations. Studies (Meyer et al., 2002) show that as respondents' age increases, normative commitment also increases. Similarly, as respondents' education level increases, normative commitment should decrease. The variable of institution size was not significantly correlated with normative commitment.

Subsequent regression analysis showed that age was a significant positive predictor of normative commitment. One reason age may predict normative commitment is that older employees may have developed more of a sense of obligation to their workplace. For instance, if the college was supportive of further education and gain of skills, older faculty members may feel not only loyal, but indebted to the college.

Another reason that age may predict normative commitment is that younger employees may be more apt to change jobs as it has become more socially acceptable for them in recent years.

Regression analysis also showed respondents' educational level was a significant negative predictor of commitment. This outcome is difficult to interpret. One potential explanation may be that faculty who have earned higher degrees may also have increased availability of job alternatives. Correlation analysis between education level and availability of job alternatives in the current study bears this out. Just *knowing* that job alternatives are available may influence the development and maintenance of the psychological contract between faculty and organization, thereby decreasing the faculty member's obligation to stay.

Limitations and Recommendations

As a result of this study, practitioners and researchers alike have a better understanding of faculty levels of organizational commitment and the factors that may predict these levels for both full-time and part-time community college faculty. The following section will discuss the limitations of the current study, as well as provide recommendations for research and practical applications to extend the value of this dissertation.

Limitations of the study

Limitations are inherent in all research, even when efforts are made to minimize their presence and subsequent impact on the findings. Before a discussion on recommendations can begin, it is important to acknowledge and explain the limitations of the current study.

There were several ways in which bias may have been introduced into the study. First, the return rate of respondents was lower than anticipated. For over a year's time and on multiple occasions, electronic invitations to participate in the study were sent to faculty. Despite these efforts, only 788 faculty responded favorably to the invitation by completing the survey.

Second, out of a total survey population of approximately 20,619 community college faculty in North Carolina, part-time faculty comprise nearly 70%. Yet, the part-time faculty in the study data set comprised just 19% of the responses. The under-representation of the part-time faculty may have an impact on the findings of this study. It is likely that the relatively more committed part-time faculty chose to participate in this study. Because of the under-sampling of the population of interest and because the relatively more committed faculty self-selected to participate, the results of this study reported here may be an underestimation of actual organizational commitment.

Another limitation is the cross-sectional design of this study – it is merely a 'snapshot' in time. The construct of commitment is a process that is ideally measured over time. Because of this, findings from this study have limited application to understanding the *development* of organizational commitment.

To date, there are no standardized mean scores for organizational commitment in higher education (Thomas, 2008). When one couples this to the paucity of studies of organizational commitment among faculty, Meyer and Allen's (1991) three-component measure of organizational commitment has not yet found its place in higher education. This study found that community college faculty rated their mean organizational commitment

within the “slightly disagree to slightly agree” (3.00 – 5.99 on a 7-point scale) range. Other studies of higher education faculty have illustrated this as well (Messer, 2006; Carver, 2008; Thomas, 2008).

There may be several reasons why community college faculty rated their organizational commitment within this range. The first may be that organizational commitment as measured by Meyer and Allen’s (1991) instrument may not completely elucidate why faculty remain with their organizations. Perhaps a specialized commitment instrument is needed to examine the reasons why community college, and more generally higher education, faculty remain with their organizations.

The second reason may be due to the nature of higher education organizations themselves. Since the mission of community colleges is “to identify and respond to the educational needs of adult learners within a specified service area” (Ayers, 2002, n.p.) faculty may remain with their institutions because of their agreement with the college’s mission. Moreover, faculty may join and remain with their colleges because the institutions represent their values or calling, which is captured in part by affective commitment. Though Meyer and Allen’s (1991) normative commitment “captures the belief that remaining with an organization is the best choice, it does not capture the notion of values” (Thomas, 2008, p. 244).

The current study attempted to capture the notion of values through its examination of intrinsic rewards. Correlation analyses showed significant positive correlations between intrinsic rewards and all three components of commitment. So it was quite surprising that regression analyses in the current study did not reveal intrinsic rewards as a significant

positive predictor for any component of organizational commitment. This outcome is in contrast to Coberly's (2004) path analysis study of university faculty that reported "intrinsic rewards had a significant direct effect on [organizational] commitment and a significant mediating effect through [job] satisfaction" (p. 86). This outcome is also in contrast to the body of kindergarten to 12th grade (K-12) education literature on the intrinsic rewards of teaching. This literature shows the most significant predictor of job commitment is intrinsic rewards (Jones, 2002; Latham, 1998; Suslu, 2006). Specific intrinsic rewards, such as "interactions with colleagues, professional autonomy and personal satisfaction" were the primary motivation for teachers to remain in their jobs (Jones, 2002, n.p.). These types of intrinsic rewards make teachers forego extrinsic rewards like institutional recognition and extrinsic financial rewards like higher salaries (Suslu, 2006).

One reason for this may be that the intrinsic rewards construct consisted of only 2 items. It is generally recommended that constructs of interest consist of at least three items (Hatcher, 1994). As discussed earlier, it was intended that intrinsic rewards be a robust predictor of organizational commitment in this study. However, the factor loadings resulting from exploratory factors analysis produced a two-item construct for intrinsic rewards. Future studies of intrinsic rewards and organizational commitment should consider utilizing Mottaz' (1981, 1988) scales of task autonomy, task significance and task involvement to measure intrinsic rewards.

Another limitation, particular to the findings of the study, was the low R^2 for normative commitment regression model. The most obvious reason for the low R^2 is that

important variables were missing from the model. Additional variables might include more survey items specifically relating to institutional practices that influence climate and culture.

Recommendations for research

This was the first known study of organizational commitment among community college faculty, purposely modeled on the Meyer and Allen (1991) conceptualization. While this study yielded significant findings, the field continues to be wide open and fertile for further research. Future study of commitment among community college faculty could create a substantial research agenda for several investigators. To that end, the author proposes several areas for future research on this topic.

As this study was the first to utilize this conceptual framework, replication of the study employing regression analyses could provide useful confirmatory information. Further studies utilizing structural equation modeling (SEM) or a path analysis may provide greater insights on the relationship between the independent variables in this study and commitment. There may also be benefit to approaching the study through another methodological paradigm. Qualitative or mixed methods studies might capture different contextual factors than the current study was able to do.

A significant finding of this study was that extrinsic rewards and organizational support were antecedents to all three components of commitment. Therefore, a major area of future study would be to determine what factors lead to increased extrinsic rewards and organizational support. While the availability of job alternatives was an antecedent specific to normative commitment and potentially to continuance commitment, it would be considerably difficult, on a practical level, to minimize job alternatives for an employee. A

researcher would need to find faculty who already perceived a lack of employment job alternatives in order to look at this antecedent more closely. Nevertheless, research that would identify specific factors that influence the antecedents of commitment would be beneficial to an increased understanding of commitment from a research, as well as a practical, viewpoint.

Another significant finding of this study is that antecedents (excluding extrinsic financial rewards) of commitment were the same for all faculty, regardless of their full-time or part-time employment status. This outcome was rather surprising given that the mean levels of each commitment component were significantly higher for full-time faculty than part-time faculty as demonstrated in the ANOVA studies. Baldwin and Chronister (2001) and Gappa and Leslie (1993) noted that benefits, defined probationary periods, multi-year appointments after probation, career-progression systems and support for professional development were all institutional practices that addressed the specific needs of part-time faculty. Carlson (2005) also examined the influence mentor assignment on organizational commitment in her study of adjunct faculty teaching at four-year Christian colleges. She found that organizational commitment levels would increase if the adjunct faculty member was assigned a mentor. Although extrinsic and intrinsic rewards were analyzed as a whole in this study, the specific variables recommended by these researchers were not included in this study. Future studies might examine these specific practices to measure how they influence commitment particularly for part-time faculty.

Another focus area for future study is the consequences of commitment. One such consequence is attrition among community college faculty. Meyer and associates (2002)

pointed to several possible factors, such as turnover and intention to withdraw, absenteeism, job performance, organizational citizenship and stress, all of which may impact commitment and thereby lead to attrition. Another consequence of commitment may be the impact it has on faculty performance. Umbach (2007) reported that part-time faculty underperform in teaching undergraduates compared to their tenured/tenure track counterparts. Murphy (2009) challenged this in her study that showed that contingent faculty used more effective teaching methods and spent more time advising students than tenured/tenure-track faculty. Clearly, more research that examines the relationship between commitment levels and how often faculty interact with students, use interactive and collaborative techniques, how much time they spend preparing for class, and their level of academic expectations surely has merit. A third consequence of commitment may be the impact it has on students. Research that examines the relationship between commitment levels among community college faculty and student outcomes such as retention and graduation rates also has merit. One such study (Jaeger and Eagen, 2009) has shown the probability of completing an associate's degree in the California community college system modestly decreases as students are exposed to part-time faculty.

The development of organizational commitment is a process. Since commitment develops over time, a longitudinal study of faculty should be undertaken. Launching such a study would perhaps best be done in cooperation with a single institution that would commit to participation over time.

Finally, more study of the growing population of part-time faculty needs to be undertaken. Community colleges in particular and higher education institutions in general

would benefit from an assessment of how part-time faculty may be utilized most effectively. Studies that specifically address the differences between part-time and full-time faculty in employment policies and other variables related to institutional practices are an important aspect of this question.

Recommendations for practice

This study provides empirical support that a rewarding and supportive work environment increases all three components of commitment. In other words, if community college faculty members feel rewarded for their teaching efforts and feel support from their organization, they will enjoy working there and will likely work harder for the organization. From a community college administrative perspective, these results are exciting! Extrinsic rewards and organizational support are facets that are amenable to change and potential improvement, whereas demographic facets, such as faculty age and education level or institutional size, are generally not as amenable. While these findings are stirring and inspiring, rewards and organizational support can easily become expendable during an era of reduced budgets and efficient spending. The following are recommendations for practice based on findings of this study.

During times of economic contraction, resources for cultivating and maintaining a supportive and rewarding environment are too often scarce. Even so, there are institutional practices that community colleges can adopt to support and reward faculty for relatively little monetary investment. What are these practices? Wallin (2007) makes 12 recommendations to community colleges for supporting the work of part-time faculty. Review of these recommendations reveals that some of are especially salient for cultivating a supportive and

rewarding environment, for part-time faculty and full-time faculty alike. A discussion of the recommendations most indicative of organizational support and extrinsic rewards is presented here.

One recommendation is extending invitations to all faculty for attendance at faculty meetings. If part-time faculty are unable to attend, then meeting minutes should be provided to them (Wallin, 2007). This recommendation seems to be derived directly from the concept of shared governance. Olson (2009) defines shared governance as “a delicate balance between faculty and staff participation in planning and decision-making processes, on the one hand, and administrative accountability on the other” (n.p.). By inviting part-time faculty to attend and participate in meetings, the college gives them opportunities to have a role in planning and decision-making. Shared governance is an important and unique aspect of higher education culture. No known studies have examined how shared governance impacts part-time faculty, and research in this area should not be overlooked. Open communication and encouraged participation in planning and decision-making processes should be goals of high priority for all community college leaders.

Another recommendation is preparation and dissemination of a faculty handbook for newly-hired instructors, both full-time and part-time. This handbook ideally would include “the basics of departmental functions, forms, student services, grading scales and procedures, academic honesty policies, sample syllabi, and safety and security procedures” (Wallin, 2007, p. 72). A faculty handbook is critical for communicating the values and culture of the college. It is the foundation for socializing new faculty to the college.

A third recommendation related to communication is the establishment of systems for communication between supervisors and faculty (Wallin, 2007). Systems of communication can include the creation of formal meeting times for face-to-face communication between a supervisor and faculty member. Systems can also include establishing acceptable technological methods for communication -- workplace phone numbers and email accounts versus personal ones. Such systems may also include the manner of communication. Carver (2008) suggests that supervisors able to use coaching skills can go a long way in building positive relationships with employees. Coaching in the workplace "is the process of open communication and feedback between the manager-coach and employee" (DeMarco, 2007, p. 37). Thus, structural and process systems for developing open communication should be a priority for community college leaders.

A fourth recommendation is the creation of a mentoring system for new faculty. Mentoring can have a two-fold purpose: 1) to help integrate faculty into the college culture, and 2) to serve as informal opportunity for professional development. As discussed earlier, socialization of faculty to the college culture may be critical in developing organizational commitment. Mentoring is one way to help make socialization effective. As for formal professional development opportunities, they are often convened within regional/national conferences that incur registration fees. These fees may be beyond the limits of contracted community college budgets. So, creation of a mentoring system may be a fiscally-efficient alternative for professional development.

A final recommendation for practice is the treatment of faculty as "valued colleagues" and the encouragement of "inclusiveness and collegiality" (Wallin, 2007, p. 73). This speaks

directly to the cultivation of a rewarding environment. As was discussed earlier, processes that facilitate the recognition and communication of faculty accomplishments reward employees and make them feel valued and included in the college.

Study summary

Upon review of the literature, no known studies have purposely modeled organizational commitment for community college faculty as a function of their full-time or part-time employment status using Meyer and Allen's conceptualization of organizational commitment. This was the first study to attempt this model of investigation.

The study defined the demographic profile of this sample of North Carolina community college faculty. Both full-time and part-time faculty survey respondents averaged in their late forties and have similar educational backgrounds in that a majority had earned a Master's degree and are affiliated with similar-sized institutions. A larger percentage of full-time faculty worked longer in their organization than their part-time counterparts.

The results of this study indicate that North Carolina community college faculty, both full-time and part-time, generally exhibit moderate levels of affective and continuance commitment to their organization. In other words, they stay with the community college where they are employed because they want to stay there and because they feel they do not have job alternatives. Moreover, these faculty generally display lower levels of normative commitment, the feeling that they owe something to the organization.

This study found a positive correlation exists between each component of commitment within the sample population. These results indicate that North Carolina

community college faculty have generally developed an emotional attachment to their organization. This attachment is associated with two concurrent outcomes. The first is that faculty have an increased perception of costs associated with leaving the organization. The second is that the faculty's obligation to the organization increases as well.

This study also provided a better understanding of the different commitment levels between full-time and part-time faculty. Full-time faculty were significantly more affectively and normatively committed than part-time faculty, even though the effect size of this significance was small to medium. These results indicate that full-time faculty have a stronger emotional attachment and an increased sense of obligation to their organizations than part-time faculty.

With one exception, regression analyses showed that all predictors for organizational commitment are the same for all community college faculty in North Carolina, regardless of full-time or part-time employment status. The one exception was the contribution of extrinsic financial rewards to affective commitment. Regression analysis of affective commitment showed the contribution of extrinsic financial rewards is different for the faculty groups. Results from this model show that as extrinsic financial rewards increase, affective commitment decreases for part-time faculty. At the same time, the model shows that as extrinsic financial rewards increase for full-time faculty, affective commitment remains uninfluenced.

Analysis further illustrated that organizational support, extrinsic rewards, respondents' level of education and age are antecedents of all three components of commitment. In addition to these four variables, the respondents' institutional size had a

significant influence on only affective commitment. The availability of job alternatives variable had a significant influence only on normative commitment.

There was little support for the inclusion of other factors, namely transferability of skills and education, in the conceptual framework related to any of the components of organizational commitment.

The limitations of the current study were acknowledged and recommendations for future research were described. In addition, several recommendations for practice were delineated based on the clear evidence that a supportive and rewarding work environment were important for increasing all three components of commitment.

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APPENDICES

Appendix A: Letter of Invitation to Faculty for Participation in Study

Dear WTCC Faculty~

I am writing to respectfully ask that you participate in my dissertation research. I am currently a doctoral candidate in the Department of Adult and Higher Education at North Carolina State University under the direction of Dr. Duane Akroyd.

With this research, I am particularly interested in how both full-time and part-time faculty members at North Carolina community colleges become committed to their institutions.

I ask that you participate in this statewide study by accessing my online survey about organizational commitment. This survey should take you about 10 minutes to complete. The following web link will connect you to the survey page until October 31, 2008, at which point the data will be compiled.

<http://www4.ncsu.edu/~dlengle/1/index.html>

Your willingness to voluntarily participate in this study would be of great assistance to me and the effort to learn more about community college faculty as a whole!

This project has been approved by the Institutional Review Board (IRB) at NCSU. All faculty responses will be collected anonymously and stored in the aggregate. Data will be analyzed using a quantitative statistical approach to determine the factors that contribute to organizational commitment.

Your participation in this study is voluntary and you may withdraw at any time without prejudice. Your choice to respond to the survey will indicate your informed consent to participate.

At the end of the survey, you may request a copy of the final report via e-mail. E-mail addresses will not be linked to responses on the survey

If you have any questions or concerns about this study, please contact me or my dissertation advisor (Dr. Duane Akroyd, 919-515-1745)

Thank you for your time and dedication.

Warmest regards,
Deborah

--

Deborah Engle, MS
Doctoral Candidate in Adult and Community College Education
North Carolina State University
Raleigh, NC 27695
phone: 919.xxx.xxxx

APPENDIX B, Continued

B.	The likelihood of being unemployed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C.	A high rate of unemployment among people in my occupation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D.	The lack of success I've had in previous job searches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		1	2	3	4	5	6	7
E.	My <i>skills</i> that I have obtained at my current organization would be useful at other organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F.	I have been able to transfer skills obtained from previous organizations to this one	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
G.	My <i>experiences</i> that I have obtained at my current organization would be useful at other organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		1	2	3	4	5	6	7
H.	My formal education would not be very useful if I were working anywhere but here	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I.	I am confident that my formal education would be valued by other organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J.	My most recent degree/certificate that I earned will open doors for me professionally	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
V. Commitment								
Listed below are statements that represent possible opinions that you may have about working at your institution. Please indicate the degree of your agreement or disagreement with each statement according to the scale below:								
		1	2	3	4	5	6	7
		Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree or Disagree	Slightly Agree	Moderately Agree	Strongly Agree
A.	I would be very happy to spend the rest of my career with this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B.	I really feel as if this organization's problems are my own	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C.	I do not feel a strong sense of "belonging" to my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D.	I do not feel "emotionally attached" to this organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
E.	I do not feel like "part of the family" at my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
F.	This organization has a great deal of personal meaning to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		1	2	3	4	5	6	7
G.	I do not feel any obligation to remain with my current employer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
H.	Even if it were to my advantage, I do not feel it would be right to leave my organization now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I.	I would feel guilty if I left my organization now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
J.	This organization deserves my loyalty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
K.	I would not leave my organization right now because I have a sense of obligation to the people in it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
L.	I owe a great deal to my organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
		1	2	3	4	5	6	7

APPENDIX B, Continued

- M. I have invested too much time in this organization to consider working elsewhere
- N. Leaving this organization now would require considerable personal sacrifice
- O. For me personally, the costs of leaving this organization would be far greater than the benefits
- P. I would not leave this organization because of what I would stand to lose
- Q. If I decided to leave this organization, too much of my life would be disrupted
- R. I continue to work for this organization because I don't believe another organization could offer the benefits I have here

VI. Rewards

Listed below are statements that represent possible opinions that you may have about working at your institution. What impact has your employment at the college provided for you in the following areas? Please indicate the degree of your level of impact with each statement according to the scale below:

1	2	3	4	5	6	7
Negative Impact	Moderately Negative Impact	Slightly Negative Impact	No Impact	Slightly Positive Impact	Moderately Positive Impact	Positive Impact

- A. The feeling of accomplishment I get from the work I do 1 2 3 4 5 6 7
- B. The feeling of satisfaction I get from knowing I am making a contribution to student learning
- C. The recognition I receive for the work I do
- D. The level of challenge posed by teaching at a college

- E. Opportunities for professional development 1 2 3 4 5 6 7
- F. Opportunity to contribute to the community college mission
- G. The lack of opportunity for promotion
- H. The lack of opportunity for salary increases
- I. The non-salary benefits package (e.g., vacation, medical, retirement, etc.) this institution provides
- J. Access to equipment and resources

- K. The mutual feeling of respect gained by working with my colleagues 1 2 3 4 5 6 7
- L. The lack of camaraderie and collegiality among my colleagues
- M. The ways in which my colleagues help me improve my work

VII. Background

Please answer the following questions by clicking the appropriate response or by filling-in-the-blank with text or numbers.

- A. Are you a **faculty** member at your institution?

APPENDIX B, Continued

Yes

No

B. If you answered "yes" to the above question, what is your current employment status?

Full-time

Part-time

C. How many contact hours per week are you involved in formal instruction with students?

D. In which discipline do you teach?

E. How long have you been employed in your current position?

Less than 1 year

1 - 4 years

5 - 9 years

10 - 14 years

15 years or more

F. What is your highest level of degree attained?

High School

Associate's

Bachelor's

Master's

Doctorate

G. In what year were you born?

Appendix C: Operationalization of Dependent and Independent Variables

Variable type	Survey Item	Code	Measure	Quantification
Dependent Variables				
Affective Commitment	V. Commitment, A-F	A = affcomma B = affcommb *C = affcommc-R *D = affcommd-R *E = affcomme-R F = affcommf	ACS: 6-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates level of affective commitment on the part of the faculty member
Continuance Commitment	V. Commitment, G-L	*G = concommg-R H = concommh I = concommi J = concommj K = concommk L = concomml	CCS: 6-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates level of continuance commitment on the part of the faculty member
Normative Commitment	V. Commitment, M-R	M = normcommm N = normcommn O = normcommo P = normcommp Q = normcommq R = normcommr	NCS: 6-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates level of normative commitment on the part of the faculty member
Independent Variables				
Organizational Support	I. Support, A-H	A = orga B = orgb C = orgc D = orgd E = orge *F = orgf-R *G = orgg-R H = orgh	SPOS: 8-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates degree of perceived organizational support
Procedural Justice	II. Department procedures, A-G	A = depta B = deptb C = deptc D = deptd E = depte F = deptf G = deptg	7-item scale, 7-point Likert-type measure; 1=very false, 7=very true	Mean sum of scores indicates level of procedural justice
Role conflict	III. Work experiences, A-H	A = rcona B = rconb C = rconc D = rcond E = rcone F = rconf G = rcong H = rconh	8-item scale, 7-point Likert-type measure; 1=very false, 7=very true	Mean sum of scores indicates level of role conflict
Role ambiguity	III. Work experiences, I-N	I = rambi J = rambj K = rambk L = rambl M = rambm N = rambn	6-item scale, 7-point Likert-type measure; 1=very false, 7=very true	Mean sum of scores indicates level of role ambiguity

*variable-R indicates reverse-coded items, where 7=strongly agree, 1=strongly disagree

APPENDIX C, Continued

Variable type	Survey Item	Code	Measure	Quantification
Independent Variables (cont.)				
Availability of job alternatives	IV. Job alternatives, A-D	A = alterna B = alternb C = alternc D = alternd	4-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates availability of job alternatives
Transferability of skills	IV. Job alternatives, E-G	E = skile F = skilf G = skilg	3-item scale, 7-point Likert-type measure; 1=strongly disagree, 7=strongly agree	Mean sum of scores indicates degree of skill transferability
Transferability of education	IV. Job alternatives, H-J	*H = eduh-R I = edui J = eduj	3-item scale, 7-point Likert-type measure; 7=strongly agree, 1=strongly disagree	Mean sum of scores indicates degree of education transferability
Intrinsic Rewards	VI. Rewards, A-D	A = intrinsa B = intrinsb C = intrinsc D = intrinsd	4-item scale, 7-point Likert-type measure; 1=negative impact, 7=positive impact	Mean sum of scores indicates level of impact of intrinsic rewards on the part of the faculty member
Extrinsic Organizational Rewards	VI. Rewards, E-J	E = extorge F = extorgf *G = extorgg-R *H = extorgh-R I = extorgi J = extorgj	6-item scale, 7-point Likert-type measure; 1=negative impact, 7=positive impact	Mean sum of scores indicates level of impact of extrinsic organizational rewards on the part of the faculty member
Extrinsic Social Rewards	VI. Rewards, K-M	K = extsock *L = extsocl-R M = extsocm	3-item scale, 7-point Likert-type measure; 1=negative impact, 7=positive impact	Mean sum of scores indicates level of impact of extrinsic social rewards on the part of the faculty member

*variable-R indicates reverse-coded items, where 7=strongly agree, 1=strongly disagree

APPENDIX C, Continued

Variable type	Survey Item	Code	Measure	Quantification
Demographics of Respondents				
Faculty member	VII. Demographics, A	A = faculty	Single item measure, 1=yes 0=no	Indicates respondents' institutional role
Employment Status	VII. Demographics, B	B = status	Single item measure, 1=full-time 0=part-time	Indicates respondents' employment status
Contact hours/week	VII. Demographics, C	C = contact_hours	Single item measure, Free-text response	N/A
Teaching Discipline	VII. Demographics, D	D = discipline	Single item measure, Free-text response	N/A
Length of Employment	VII. Demographics, E	E = tenure	Single item measure, 1=less than 1 yr 2=1-4 yrs 3=5-9 yrs 4=10-14 yrs 5=15 yrs or more	Indicates respondents' length of employment
Educational Degree	VII. Demographics, F	F = degree	Single item measure, 1=High school 2=Associate's 3=Bachelor's 4=Master's 5=Doctorate	Indicates respondents' educational degree
Age	VII. Demographics, G	G = dob, Dummy code = age (2009-dob)	Single item measure, Continuous variable	Indicates respondents' age
Institutional size	Not included in survey, data tracked as surveys submitted	N/A	Single item measure, ^Categorical variable 1= large institution (>10000 student enrollment) 2= medium institution (2000-9999 student enrollment) 3=small institution (<2000 student enrollment)	Indicates respondents' institutional affiliation and size of institution

*variable-R indicates reverse-coded items, where 7=strongly agree, 1=strongly disagree

Appendix D: Initial Eigenvalues of Exploratory Factor Analysis for
Availability/Transferability Variables

	Eigenvalue	Difference	Proportion	Cumulative
1	5.994	2.026	0.620	0.620
2	3.967	2.921	0.411	1.031
3	1.046	0.987	0.108	1.139
4	0.060	0.115	0.006	1.145
5	-0.055	0.122	-0.006	1.140
6	-0.177	0.152	-0.018	1.121
7	-0.329	0.078	-0.034	1.087
8	-0.407	0.029	-0.042	1.045
9	-0.436		-0.045	1.000

Appendix E: Initial Eigenvalues of Exploratory Factor Analysis for Rewards Variables

	Eigenvalue	Difference	Proportion	Cumulative
1	7.715	5.918	0.800	0.800
2	1.797	0.824	0.186	0.986
3	0.973	0.399	0.101	1.087
4	0.574	0.358	0.060	1.147
5	0.216	0.125	0.022	1.169
6	0.091	0.041	0.009	1.179
7	0.050	0.190	0.005	1.184
8	-0.140	0.064	-0.015	1.169
9	-0.203	0.078	-0.021	1.148
10	-0.282	0.063	-0.029	1.119
11	-0.345	0.018	-0.036	1.083
12	-0.363	0.078	-0.038	1.046
13	-0.441		-0.046	1.000

Appendix F: Results of Reliability Testing of Independent and Dependent Variables

Table 18

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable,
organizational support

Item	Mean	SD	orga	orgb	orgc	orgd	orge	orgf	orgg	orgh
orga	5.04	1.72	--							
orgb	5.16	1.69	0.83*	--						
orgc	4.89	1.68	0.84*	0.84*	--					
orgd	5.50	1.52	0.69*	0.75*	0.74*	--				
orge	5.42	1.51	0.60*	0.60*	0.60*	0.63*	--			
orgf	4.31	2.02	0.41*	0.45*	0.43*	0.39*	0.34*	--		
orgg	5.28	1.74	0.66*	0.68*	0.66*	0.58*	0.51*	0.62*	--	
orgh	4.80	1.50	0.54*	0.57*	0.54*	0.56*	0.49*	0.24*	0.42*	--

*p < .01

APPENDIX F, Continued

Table 19

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *role conflict*

Item	Mean	SD	rcona	rconb	reonc	rcond	rcone	rconf	rcong	rconh
rcona	4.43	1.95	--							
rconb	3.49	2.00	0.55*	--						
reonc	2.86	1.82	0.52*	0.61*	--					
rcond	4.02	2.08	0.49*	0.48*	0.48*	--				
rcone	3.11	1.98	0.50*	0.58*	0.62*	0.66*	--			
rconf	3.66	2.06	0.50*	0.53*	0.56*	0.62*	0.73*	--		
rcong	3.51	2.07	0.53*	0.76*	0.63*	0.51*	0.64*	0.58*	--	
rconh	3.60	2.13	0.58*	0.53*	0.56*	0.44*	0.54*	0.49*	0.60*	--

*p < .001

Table 20

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *availability of alternatives*

Item	Mean	SD	alterna	alternb	alternc	alternd
alterna	3.53	2.21	--			
alternb	3.35	2.24	0.70*	--		
alternc	2.69	1.88	0.57*	0.73*	--	
alternd	2.21	1.65	0.48*	0.55*	0.56*	--

*p < .001

APPENDIX F, Continued

Table 21

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *transferability of skills*

Item	Mean	SD	skile	skilf	skilg
skile	6.30	1.08	--		
skilf	6.37	1.04	0.42*	--	
skilg	6.41	0.97	0.76*	0.47*	--

*p < .001

Table 22

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *transferability of education*

Item	Mean	SD	edui	eduj
edui	6.11	1.39	--	
eduj	5.68	1.52	0.60*	--

*p < .001

Table 23

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *intrinsic rewards*

Item	Mean	SD	intrinsa	intrinsb
intrinsa	6.31	0.98	--	
intrinsb	6.58	0.76	0.71*	--

*p < .001

APPENDIX F, Continued

Table 24

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *extrinsic rewards*

Item	Mean	SD	intrinsic	extorge	extorgf	extorgj	extsock	extsocm
intrinsic	4.89	1.63	--					
extorge	5.18	1.54	0.46*	--				
extorgf	5.51	1.39	0.46*	0.63*	--			
extorgj	4.64	1.71	0.38*	0.41*	0.36*	--		
extsock	5.72	1.37	0.40*	0.42*	0.44*	0.38*	--	
extsocm	5.14	1.56	0.44*	0.45*	0.44*	0.35*	0.65*	--

*p < .001

Table 25

Pearson's Intercorrelation Matrix of Survey Items for the Independent Variable, *extrinsic financial rewards*

Item	Mean	SD	extorgg	extorgh
extorgg	4.73	1.42	--	
extorgh	4.93	1.62	0.59*	--

*p < .001

APPENDIX F, Continued

Table 26

Pearson's Intercorrelation Matrix of Survey Items for the Dependent Variable, *affective commitment*

Item	Mean	SD	affcomma	affcommb	affcommc	affcommd	affcomme	affcommf
affcomma	5.56	1.76	--					
affcommb	4.51	1.88	0.55*	--				
affcommc	5.03	1.99	0.50*	0.44*	--			
affcommd	5.19	1.86	0.53*	0.48*	0.76*	--		
affcomme	5.11	1.95	0.57*	0.47*	0.75*	0.81*	--	
affcommf	5.33	1.73	0.61*	0.55*	0.57*	0.65*	0.64*	--

*p < .001

Table 27

Pearson's Intercorrelation Matrix of Survey Items for the Dependent Variable, *continuance commitment*

Item	Mean	SD	concommg	concommh	concommi	concommj	concommk	concomml
concommg	4.85	2.05	--					
concommh	3.99	2.04	0.40*	--				
concommi	3.98	2.06	0.45*	0.67*	--			
concommj	4.75	1.91	0.53*	0.49*	0.51*	--		
concommk	4.72	1.88	0.50*	0.61*	0.65*	0.60*	--	
concomml	4.53	1.85	0.49*	0.38*	0.42*	0.65*	0.54*	--

*p < .001

APPENDIX F, Continued

Table 28

Pearson's Intercorrelation Matrix of Survey Items for the Dependent Variable, *normative commitment*

Item	Mean	SD	normcomm	normcomn	normcomo	normcomp	normcomq	normcomr
normcomm	3.53	1.91	--					
normcomn	3.91	2.03	0.54	--				
normcomo	4.07	1.99	0.49	0.67	--			
normcomp	3.97	1.97	0.47	0.62	0.73	--		
normcomq	3.83	2.01	0.45	0.66	0.64	0.69	--	
normcomr	3.56	2.10	0.32	0.38	0.47	0.49	0.46	--

*p < .001

Appendix G: Analysis of Variance, Multiple Regression Output and Collinearity Diagnostics
for Affective Commitment Regression Model

Table 29

Analysis of Variance for Affective Commitment Regression Model

The SAS System					
10:13 Tuesday, February 23, 2010					
The REG Procedure					
Model: MODEL1					
Dependent Variable: affective					
Number of Observations Read					788
Number of Observations Used					732
Number of Observations with Missing Values					56
Source	DF	Sum of Squares	Mean Squares	F Value	Pr > F
Model	20	1050.08	52.50401	56.47	<.0001
Error	711	661.0944	0.92981		
Corrected Total	731	1711.175			

Table 30

Multiple Regression Output for Affective Commitment Regression Model

Root MSE	0.96427	R-Square	0.6137
Dependent Mean	5.1046	Adj R-Sq	0.6028
Coeff Var	18.89014		

APPENDIX G, Continued

Table 31

Collinearity Diagnostics for Affective Commitment Regression Model

	Standardized Estimate	Tolerance	Variance Inflation	Eigenvalue	Condition Index
Intercept	0.00	.	0.00		
Org Support	0.35	0.09	11.44	7.22	1.00
Role Conflict	-0.03	0.10	9.72	3.74	1.39
Alternatives	-0.07	0.17	5.81	1.40	2.27
Transfer Skills	0.01	0.15	6.77	1.21	2.45
Transfer Education	-0.02	0.15	6.69	1.14	2.52
Intrinsic Rewards	0.12	0.13	7.86	0.98	2.72
Extrinsic Rewards	0.34	0.10	9.56	0.96	2.74
Extrinsic Financial Rewards	-0.11	0.17	5.94	0.90	2.83
Status	-0.08	0.01	167.23	0.69	3.23
Degree	-0.08	0.95	1.06	0.62	3.42
Size	-0.08	0.96	1.04	0.45	4.00
Age	0.13	0.96	1.04	0.37	4.41
Status*Orgsupport	0.20	0.02	47.34	0.15	6.85
Status*Rolconflict	0.11	0.05	19.88	0.06	11.35
Status*Alternative	-0.05	0.11	9.33	0.04	12.74
Status*Skills	0.01	0.01	87.39	0.02	17.53
Status*Edu	0.09	0.03	34.10	0.02	21.92
Status*Intreward	-0.24	0.01	117.06	0.01	24.21
Status*Extreward	-0.08	0.02	52.67	0.01	32.22
Status*Ext_FinReward	0.21	0.05	20.91	0.00	40.54

Appendix H: Analysis of Variance, Multiple Regression Output and Collinearity Diagnostics
for Continuance Commitment Regression Model

Table 32

Analysis of Variance for Continuance Commitment Regression Model

The SAS System					
10:13 Tuesday, February 23, 2010					
The REG Procedure					
Model: MODEL1					
Dependent Variable: continuance					
Number of Observations Read					788
Number of Observations Used					732
Number of Observations with Missing Values					56
Source	DF	Sum of Squares	Mean Squares	F Value	Pr > F
Model	20	749.7834	37.48917	27.26	<.0001
Error	711	977.7947	1.37524		
Corrected Total	731	1727.578			

Table 33

Multiple Regression Output for Continuance Commitment Regression Model

Root MSE	1.17271	R-Square	0.4340
Dependent Mean	4.48015	Adj R-Sq	0.4181
Coeff Var	26.17562		

APPENDIX H, Continued

Table 34

Collinearity Diagnostics for Continuance Commitment Regression Model

	Standardized Estimate	Tolerance	Variance Inflation	Eigenvalue	Condition Index
Intercept	0.00	.	0.00		
Org Support	0.28	0.09	11.44	7.22	1.00
Role Conflict	-0.07	0.10	9.72	3.74	1.39
Alternatives	-0.12	0.17	5.81	1.40	2.27
Transfer Skills	-0.12	0.15	6.77	1.21	2.45
Transfer Education	0.02	0.15	6.69	1.14	2.52
Intrinsic Rewards	0.08	0.13	7.86	0.98	2.72
Extrinsic Rewards	0.27	0.10	9.56	0.96	2.74
Extrinsic Financial Rewards	-0.02	0.17	5.94	0.90	2.83
Status	-0.42	0.01	167.23	0.69	3.23
Degree	-0.14	0.95	1.06	0.62	3.42
Size	-0.03	0.96	1.04	0.45	4.00
Age	0.09	0.96	1.04	0.37	4.41
Status*Orgsupport	0.26	0.02	47.34	0.15	6.85
Status*Rolconflict	0.12	0.05	19.88	0.06	11.35
Status*Alternative	0.13	0.11	9.33	0.04	12.74
Status*Skills	0.28	0.01	87.39	0.02	17.53
Status*Edu	0.09	0.03	34.10	0.02	21.92
Status*Intreward	-0.11	0.01	117.06	0.01	24.21
Status*Extreward	-0.12	0.02	52.67	0.01	32.22
Status*Ext_FinReward	-0.11	0.05	20.91	0.00	40.54

Appendix I: Analysis of Variance, Multiple Regression Output and Collinearity Diagnostics
for Normative Commitment Regression Model

Table 35

Analysis of Variance for Normative Commitment Regression Model

The SAS System					
10:13 Tuesday, February 23, 2010					
The REG Procedure					
Model: MODEL1					
Dependent Variable: normative					
Number of Observations Read					788
Number of Observations Used					731
Number of Observations with Missing Values					57
Source	DF	Sum of Squares	Mean Squares	F Value	Pr > F
Model	20	324.0403	16.20201	7.82	<.0001
Error	710	1471.603	2.07268		
Corrected Total	730	1795.643			

Table 36

Multiple Regression Output for Normative Commitment Regression Model

Root MSE	1.43968	R-Square	0.1805
Dependent Mean	3.80178	Adj R-Sq	0.1574
Coeff Var	37.86861		

APPENDIX I, Continued

Table 37

Collinearity Diagnostics for Normative Commitment Regression Model

	Standardized Estimate	Tolerance	Variance Inflation	Eigenvalue	Condition Index
Intercept	0.00	.	0.00		
Org Support	0.31	0.09	11.44	7.22	1.00
Role Conflict	0.20	0.10	9.72	3.74	1.39
Alternatives	0.18	0.17	5.81	1.40	2.27
Transfer Skills	-0.12	0.15	6.77	1.21	2.45
Transfer Education	-0.09	0.15	6.69	1.14	2.52
Intrinsic Rewards	-0.01	0.13	7.86	0.98	2.72
Extrinsic Rewards	0.28	0.10	9.56	0.96	2.74
Extrinsic Financial Rewards	0.08	0.17	5.94	0.90	2.83
Status	0.50	0.01	167.17	0.69	3.23
Degree	-0.11	0.95	1.06	0.62	3.42
Size	-0.03	0.96	1.04	0.45	3.99
Age	0.09	0.96	1.04	0.37	4.41
Status*Orgsupport	-0.37	0.02	47.33	0.15	6.85
Status*Rolconflict	-0.25	0.05	19.88	0.06	11.35
Status*Alternative	0.02	0.11	9.33	0.04	12.74
Status*Skills	0.55	0.01	87.41	0.02	17.52
Status*Edu	-0.02	0.03	34.08	0.02	21.91
Status*Intreward	-0.02	0.01	117.02	0.01	24.21
Status*Extreward	-0.12	0.02	52.65	0.01	32.22
Status*Ext_FinReward	-0.24	0.05	20.90	0.00	40.54