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Commitment and Antecedents of Police Officers, First Level, and Mid-Level Supervisors in the Turkish National Police: An Empirical Study of the Three-Component Model of Organizational Commitment

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A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

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ABSTRACT

COMMITMENT AND ANTECEDENTS OF POLICE OFFICERS, FIRST LEVEL, AND MID-LEVEL SUPERVISORS IN THE TURKISH NATIONAL POLICE: AN EMPIRICAL STUDY OF THE THREE-COMPONENT MODEL OF ORGANIZATIONAL COMMITMENT

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The main focus of this study was to investigate the relationship between the dependent variables of affective, continuance, and normative commitment and job satisfaction, job characteristics, role characteristics, and selected demographic variables. This study also aimed to make a comparison between police officers and first and mid-level supervisors of the Turkish National Police in order to test whether there was a difference between their commitment levels. The final purpose was to examine the moderating role of growth need strength (GNS) and the mediating role of overall job satisfaction between the five job characteristics and three components of organizational commitment.

A total of 1,429 police officers and police supervisors were obtained and selected from various departments. An electronic survey was used to gather data from the target population. Eighteen hypotheses were developed and tested through various statistical

analyses. The results revealed that role conflict and role ambiguity were inversely related to affective commitment. A positive significant relationship existed between affective commitment and tenure, task significance, autonomy, and intrinsic and extrinsic job satisfaction. The relationship between continuance commitment and education, autonomy, and role conflict were significant. Number of children, task significance, role ambiguity, intrinsic and extrinsic job satisfaction all made significant contributions to the variance in normative commitment. There was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level supervisors and between first level supervisors and police officers. Overall job satisfaction was found to be a mediator between all five job characteristics and affective and normative commitment. Finally, GNS was a moderator between task identity and affective commitment, skill variety and continuance commitment, and job characteristics of autonomy and job feedback and normative commitment.

On the whole, findings of this study revealed important theoretical, policy, and practical implications. Through an examination of the various aspects of organizational commitment and an in-depth investigation of the relationships between specific variables to components of organizational commitment, this study help researchers understand all aspects of organizational commitment from the perspective of police officers and police supervisors.

CHAPTER I

INTRODUCTION

Over the past three decades, organizational commitment has been researched extensively and has been identified as one of the most important variables in understanding the work behavior of employees (Allen, 1991; Boulian, 1974; Chen & Francesco, 2000; Hrebiniak & Alutto, 1972; Meyer & Allen, 1991; Mowday, Steers, & Porter, 1979; Porter, Steers, & Boulian, 1974; Steers, 1977; Wong, Ngo, & Wong, 2002) as well as one of the most important aspects in the study of management (Beck & Wilson, 1997; Mathieu & Zajac, 1990; Park & Rainey, 2007). Numerous efforts have been devoted to understand the nature, antecedents, and mediators of organizational commitment, a construct that has been identified as an important predictor of organizational outcomes, namely in-role job performance (Angle & Perry, 1981; Becker, Billings, Eveleth, & Gilbert, 1996; Chen, Silverthorne, & Hung, 2006; Steers, 1977), citizenship behavior (Peterson, 2004; Van & Ang, 1998), absenteeism (Eby, Freeman, Rush, & Lance, 1999; Mowday et al., 1979), and turnover rates (Wong et al., 2002). In addition to the impact of organizational commitment on an individual, the positive benefits of a committed workforce are also recognized as important determinants of organizational effectiveness (Steers, 1977).

Essentially, researchers who include organizational commitment in their studies are interested in examining the psychological attachment that an individual has to a particular organization. Although definitions of organizational commitment vary

according to Meyer and Allen (1991), the common view remains that "organizational commitment is a psychological state that a) characterizes the employee's relationship with the organization and b) has implications for the decision to continue membership in the organization" (p. 67).

Organizational commitment is critical for the success of any organization (Hogan, Lambert, Jenkins, & Wambold, 2006) because it is, in itself, an important job outcome due to its demonstrated influence on positive work-related attitudes and behavior (Gregersen & Black, 1992). Commitment theorists reason that as employees take responsibility for their own actions, they become committed to their acts and develop positive attitudes to justify that behavioral commitment. Committed employees who are highly motivated to contribute their time and energy to the pursuit of organizational goals are increasingly acknowledged to be the organization's primary available asset (Robertson, Lo, & Tang, 2007). Therefore, commitment can become an important way to increase overall employee performance within organizations (Chen, Silverthorne, & Hung, 2006). As Lincoln and Kalleberg (1990) stated, "the committed employee's involvement in the organization takes on moral overtones, and his or her stake extends beyond the satisfaction of merely personal interest in employment, income, and intrinsically rewarding work" (p. 22). On the other hand, low employee commitment has been related to low levels of morale (DeCottis & Summers, 1987) and decreased measures of altruism and compliance (Schappe, 1998). In other words, noncommitted employees may describe the organization in negative terms to outsiders thereby inhibiting the organization's ability to hire high-quality employees (Mowday, Porter, & Steers,

1982). In essence, without committed employees, an organization will ultimately fail. Therefore, it is critically important to identify the determinants of organizational commitment (Chen et al., 2006).

Background for the Research Questions

In reviewing the literature related to organizational commitment, there was consistency among scholars that the focus has evolved from a single to multiple commitments (Kalbers & Cenker, 2007). Numerous researchers have argued that the measure of organizational commitment should be a multidimensional construct in order to reflect both global commitment and commitment to constituency-specific groups (Angel & Perry, 1981; Hunt & Morgan, 1994; Meyer & Allen, 1991; Meyer & Allen, 1997; Penley & Gould, 1988). During the early 1990s, Meyer and Allen (1991) conceptualized and proposed a model of organizational commitment comprised of three components: (a) affective, (b) continuance, and (c) normative. They described affective commitment as the employee's emotional attachment to, identification with, and involvement in the organization and believed that employees with a strong affective commitment continue employment with the organization because they want to do so. Accordingly, continuance commitment refers to an awareness of the costs associated with leaving the organization. For example, employees whose primary link to the organization is based on continuance commitment remain because they must do so. Finally, normative commitment reflects a feeling of obligation to continue employment. In other words, employees who reflect a high level of normative commitment feel that they should remain with the organization because they ought to (Meyer & Allen 1997).

Meyer and Allen (1991) viewed affective, continuance, and normative organizational commitment to consist of three components rather than separate types of commitment, because an employee's organizational relationship might reflect varying degrees of all three components. Based on this approach, they assumed that each individual would have some level of all three commitments. Meyer and Allen (1997) further recommended that researchers should investigate these components and consider the overall strength of all three forms rather than assigning a specific type of commitment to an employee. Thus, the underlying organizational commitment theory in relation to my study was based on the model of commitment developed by Allen and Meyer (1990) and Meyer and Allen (1991) that will be described more fully in the theoretical framework section to be discussed in Chapter II.

Organizational commitment scholars have devoted much attention to identify the antecedents of organizational commitment. In their meta-analytic reviews, Mathieu and Zajac (1990) listed over 20 antecedents to organizational commitment. For example, meta-analytic researchers have suggested that organizational commitment is associated with a number of personal characteristics, job and role characteristics, and facets of job satisfaction (e.g., Diefendorff, Brown, Kamin, & Lord, 2002; Mowday et al., 1982; Rabinowitz & Hall, 1977).

Earlier efforts directed toward understanding organizational commitment have emphasized the importance of job satisfaction (Locke, 1976), and psychological and organizational researchers have more recently concurred that job satisfaction is an important mediating construct in the development of employee commitment (Yoon &

Thye, 2002). Further, job satisfaction has been observed to be a significant determinant of organizational commitment as exemplified by numerous researchers (Knoop, 1995; Mottaz, 1987; Pool & Pool, 2007; Porter et al., 1974; Reid et al., 2008; Testa, 2001; Vanderberg & Lance, 1992; Williams & Anderson, 1991; Young, Worchel, & Woehr, 1998). Correspondingly, today's organizational managers have also placed great importance on employee job satisfaction (Yew, 2008). In short, researchers have considered job satisfaction and commitment to be important to both the employer and the employee. According to Spector (1997), for example, the use of assessing job satisfaction from an organizational perspective can be a reflection of organizational functionality. Likewise, from an employee's point of view, job satisfaction is central to one's work behavior in creating a positive impact on job outcomes (Begley & Czajka, 1993). Accordingly, satisfied employees may be more likely committed to their organizations (Yew, 2008) as exemplified by numerous researchers who have used various facets or dimensions of job satisfaction to predict organizational commitment. In an effort to evaluate the relationship between job satisfaction and organizational commitment, intrinsic job satisfaction and extrinsic job satisfaction are included in my research that will focus on several aspects of one's job to predict affective, continuance, and normative commitment (Buitendach & Witte, 2005).

In addition to job satisfaction, a majority of scholars have drawn upon Hackman and Oldham's (1976) Job Characteristics Model (JCM) to suggest that enriched jobs are likely to yield higher organizational commitment among employees (Steers, 1977). Hackman and Oldham (1975) defined five core job characteristics: (a) skill variety, (b)

task identity, (c) task significance, (d) autonomy, and (e) job feedback. Researchers have reported significant correlations between one or more of these job characteristics and how they relate to commitment. For example, the belief that these job characteristics influence commitment has been supported by numerous scholars (Batt & Applebaum, 1995; Glisson & Durick, 1988; Loscocco, 1989; Sajid & Ramay, 2008). The meta-analyses conducted by Fried and Ferris, (1987), Loher, Noe, Moeller, and Fitzgerald (1985) and Spector (1985) have also supported this proposition; thus, Hackman and Oldman's (1975) JCM may provide a useful framework for examining the five job characteristics as they relate to organizational commitment (Mathieu & Zajac, 1990).

Another significant antecedent of organizational commitment includes role related characteristics that are generally discussed in terms of role conflict, role ambiguity, and role overload (Mathieu & Zajac, 1990). Mowday et al. (1982) proposed the role variable as being another category of organizational commitment.

Finally, researchers have argued that individual differences play an insignificant role in determining job satisfaction and job commitment (Aven, Parker, & McEvoy, 1993; Colbert & Kwon, 2000; Nijhof, Jong, Beukhof, & Gijs, 1998). Conversely, Hackman and Oldham (1976) suggested that individuals often interpret their jobs and organizations based on personal characteristics such as their own beliefs and values that can affect job satisfaction and commitment to the organization. According to Ting (1997), researchers should therefore include personal or demographic characteristics in their studies in order to control for the likely effects that these characteristics have on organizational commitment.

Statement of the Problem

In order to achieve increased efficiency and effectiveness, most Western countries have initiated substantial public reform programs over the past decade. However, the nature of reform within public programs, namely social services, has simply been aimed at those outputs by increasing the workload of public employees that coincidently achieved the political objective of cost-cutting (Brunetto & Farr-Wharton, 2003). Like other public services, reform programs in police services have also been aimed at cutting costs and have often focused on the problem of corruption and accountability. Consequently, a majority of Western police services have made changes in their management practices (Fleming & Lafferty, 2000) and have established protocols that document how each policing task should be accomplished as well as how either victims, criminals, or the public should be treated.

Like Western democracies, the Turkish government has undertaken a series of public service reforms to keep up with post-traditional public practices. According to the 2001 United Nations Development Programme country report, Turkey is one of the fastest developing countries in the world. In comparison to 1990-1998, for example, Turkey is developing rapidly and if the trend continues, the country can expect to be evenly balanced with developed countries by 2011. When considering Turkey's policing over the last decade, one can readily observe that it has undergone a substantial program of reform based on an agenda developed by the police as well as the government that share the common objective of improving the quality of service and customer satisfaction (Bahar, 2005). According to Brunetto and Farr-Wharton (2003), Turkey's reforms and

changes in police expectations may have affected the satisfaction and commitment among police officers and police supervisors. Despite the growing interest among social scientists and psychologists, however, the area of study regarding organizational commitment has received little attention (Dick & Metcalfe, 2001).

While organizational commitment has been reviewed, defined, and measured in various types of organizations and has been determined to demonstrate great influence on effectiveness, there are relatively few studies that have applied this literature to the study of law enforcement and even fewer to police officers (Beck & Wilson, 1997; Jenks, Carter, & Jenks, 2007; Maanen, 1975). Moreover, a limited amount of literature exists on police personnel in a non-Western context in relation to commitment (Aremu, 2005; Aremu & Adeyoju, 2003; Gasic & Pagon, 2004). In particular, there is no research available that has focused on the antecedents, moderators, and mediators of the various components of organizational commitment in the Turkish National Police (TNP).

Besides the scarcity of literature devoted to police organizational commitment, there is also a lack of generalizability concerning the application of intrinsic and extrinsic job satisfaction, job characteristics, role related variables, and personal characteristics found in policing. Given that police officers, first level, and mid-level supervisors differ according to pay, status, and job conditions, they would thus be more likely and uniquely committed to their organizations.

A final difficulty in evaluating organizational commitment stems from a lack of specificity with a one-dimensional construct of organizational commitment. Designed specifically to address the components of commitment, however, Allen and Meyer (1990)

developed a model of organizational commitment that included three forms of commitment: (a) affective, (b) continuance, and (c) normative. Because little research has been conducted to assess the different ranks of police officers and to compare multiple components of organizational commitment, Allen and Meyer's model is important.

Purpose of the Study

The primary goal of my study was to examine the relationship between facets of job satisfaction, job and role characteristics, and selected demographic variables to affective, continuance, and normative commitment within the Turkish National Police (TNP). Personal or demographic variables included tenure, education, gender, number of children, marital status, and management level. Job characteristics were comprised of skill variety, task identity, task significance, autonomy, and job feedback, while role related variables consisted of role ambiguity, role conflict, and role or work overload. Finally, job satisfaction included intrinsic, extrinsic, and overall job satisfaction. All of these variables were examined in order to determine the extent to which they explained affective, continuance, and normative commitment in the TNP.

In addition, the levels of affective, continuance, and normative commitment are identified in my study. In particular, a comparison was made between police officers and supervisors to test whether there was a difference in their levels of affective, continuance, and normative commitment.

Finally, my study was designed to broaden the ongoing discussion concerning the moderating role of growth need strength (GNS) and the mediating role of overall job satisfaction between Hackman and Oldham's (1976) five job characteristics and Allen

and Meyer's (1990) three components of organizational commitment. According to Hackman and Oldham's Job Characteristics Model (JCM), the relationship between the core job characteristics and positive outcomes were moderated by an individual employee's GNS that have generally been overlooked (Whittington & Evans, 2005). Although psychological and organizational scholars have concurred that overall job satisfaction is an important mediating construct in the development of commitment (Mowday et al., 1982), this topic has been ignored in the literature. Therefore, my study filled this void by assessing the moderating role of GNS as well as the mediating role of overall job satisfaction between skill variety, task identity, task significance, autonomy, and job feedback characteristics and the components of affective, continuance, and normative commitment.

Significance of the Study

Evaluation of commitment is a current and important issue for police agencies as well as other government organizations. Although the police play a vital role in maintaining law and order, members typically work in unpredictable situations that often involve stress and frustration. For example, numerous activities are discretionary and thus demand a high level of commitment from police officers to their agency (Steinheider, Bayerl, & Wuestewald, 2006). On the other hand, there is relatively little opportunity in the public sector for providing employee incentives beyond base salaries. Thus, public enterprises generally lack the ability to offer monetary rewards that include raises, bonuses, or profit sharing. Consequently, public managers must rely on affective factors such as pride, duty, and commitment in order to instill a positive employee work ethic.

Essentially, unions, civil service protections, and the inherent discretionary nature of police work tend to insulate officers from both sanctions and incentives. In other words, if police officers choose to work hard, they might do so out of their individual work ethic and group norms that can result in important ramifications for personal initiatives and effectiveness (Wuestewald, Arrow, & Steinheider, 2006).

A review of the literature relating to organizational behavior indicated that employees who are committed to their jobs are less likely to be absent and are more likely to be concerned with improved performance. Based on these findings, policy makers should consider developments that shape employee commitment and ensure that these issues are addressed in management policies. Until only recently, however, has the role of human resource departments within police organizations begun to consider the importance of strategic resource development, more especially in non-Western countries. Although there is a body of literature that emphasizes the significance of organizational commitment and its determinants, there is obviously a need to understand what commitment is and how it is developed within the police environment (Metcalfe & Dick, 2000).

Theoretically, my study contributes to the literature regarding police commitment. Readers may find it difficult to gather the many pieces needed in order to grasp the entire picture since organizational commitment is an extremely broad topic. Therefore, by examining the various aspects of organizational commitment and exploring the relationship between specific variables to components of organizational commitment, researchers should be provided with an understanding of the entire picture from a police

perspective. From a practical point of view, my study represents a significant tool for policymakers and researchers alike who have future plans of researching similar topics related to police organizations, in particular the Turkish National Police. Meyer and Allen (1997) argued that there is a link between organizational commitment and productivity in terms of job outcomes, namely performance and attendance. Assumedly, the findings of my study will serve the interests of police chiefs, human resource administrators, and other personnel who work directly with police officers and supervisors.

Although previous research conducted on commitment to policing has focused primarily on either police officers or civilians (Brunetto & Farr-Wharton, 2003; Dick & Metcalfe, 2001; Lim & Teo, 1998; McElroy, Wardlow, & Morrow, 1999; Morris, Shinn, & DuMont, 1999) and high command staff (Jenks et al., 2007), my study was designed to join police officers and supervisors together in order to reveal the differences between supervisory and nonsupervisory positions in terms of affective, continuance, and normative commitment. In addition, my study represents the first that has discussed the organizational commitment components held by both police officers and supervisors employed by the Turkish National Police (TNP). To date, there has been no empirical research related to the TNP that has centered on the antecedents, moderators, and mediators of affective, continuance, and normative commitment.

Although commonly believed to be a non-Western country, Turkey is located between the East and the West. In other words, Turkey is geographically a bridge between Europe and Asia and is likely to join the European Union in the future. As Boland and Fowler (2000) pointed out, policing in Turkey has been following the general

movement towards more efficient public organizations in the West. In addition, the country's membership process to the European Union (EU) has also speeded up this movement in the TNP, a significant timing that gives importance to my study. Specifically, examining the components of organizational commitment and their relationship to various variables is timely in order to plan future managerial strategies within the organization.

Turkish National Police

There was a need to provide general information about the TNP in order to fully understand the problem and significance of my study and to distinguish the exact differences between TNP and other police agencies serving in Western countries in terms of culture and organizational structure. Therefore, the following brief history of the TNP is presented.

The Turkish National Police and gendarmerie represent the two main organizations devoted to Turkey's internal security. Generally, whereas the national police is in charge of security and law enforcement in cities and towns, townships, greater rural communities, border gates, highways, and airports (Yayla, 2006), gendarmerie provides security only in rural areas other than outside the municipal boundaries of cities and provincial towns (Durmaz, 2007). Different from TNP, gendarmerie is considered as a military security force that functions under the Turkish Army.

The TNP is extremely centralized with the Ministry of the Interior holding the highest authority at the top of the organization's structure (see Appendix A). The General Director of Security who serves as head of the TNP is appointed by the Minister of the

Interior. Under the control of the General Directorate and in harmony with national territorial divisions, there are 81 provincial security departments, each of which is headed by a first class chief superintendent. In addition, each provincial security department has subdivisions in cities and small towns. Local police stations in the cities and towns are represented at the lowest structural level (Gultekin & Ozcan, 1999).

Functions and Units

In terms of TNP's area of responsibility, the agency can be classified as administrative police, judicial police, and political police. The administrative police perform general works according to citizen safety and property that include

> enforcement of laws and regulations, prevention of smuggling and arrest of smugglers, quelling of public disorder, fingerprinting and photographing, public licensing, controlling traffic and inspecting motor vehicles, apprehending thieves and military deserters, locating missing persons, and keeping track of foreigners residing or traveling in Turkey (General Directorate of Security, 2009, p. 1).

On the other hand, judicial police work closely with justice administrators and assist in judicial works such as investigating crimes, issuing arrest warrants, and helping prosecutors to assemble evidence for trial (General Directorate of Security, 2009). Finally, political police struggle with groups whose activities are identified as contrary to the Republic's security. Briefly, protection of the state's integrity and preservation of the Constitution can be considered as political police work (Durmaz, 2007).

Training

The Department of Education and the Police Academy represent two departments that afford training to TNP. Although training is provided by the Department of Education that operates under the General Directorate of Security, preprofessional training is offered by the Police Academy that includes the following programs.

Undergraduate Training

This academic training consists of a two-year undergraduate program wherein police candidates receive training and education at 25 different police professional high schools in various cities across Turkey. Graduates are appointed as nonranking police officers.

Bachelor's Degree Training

In this 4-year university level degree program provided by the faculty of the Turkish Police Academy's (2009) Security Sciences Institute, 75% of the students are accepted (4-year high school level) from the police college graduates, whereas the other 25% are derived from civilian high schools. Graduates of the bachelor's degree training program are assigned as police sergeants (Caglar, 2004).

Post-graduate Training

To be accepted into this program, TNP members must pass an examination and receive departmental permission for a 1-year-duration program. The Security Sciences Institute provides a 4-semester master's program in which the first two semesters include theoretical training and the remaining two are dedicated to dissertation preparation. As an

advantage, post-graduate students' salaries are paid during the training period (Turkish Police Academy, 2009).

Management Training

There are two different management training programs provided by the Security Sciences Institute. The higher level training is provided to third class chief superintendents who pass the promotional examination for security services, whereas mid-level management training is provided to police captains who pass the promotional examination (Turkish Police Academy, 2009).

In addition to the preprofessional training programs, TNP members occasionally receive training based on their expertise and organizational needs. In-service training is provided by either the Department of Education or the members' own departments in which they serve (Durmaz, 2007).

Uniqueness of the Turkish National Police

In the TNP, organizational units and offices are arranged in hierarchical order. As presented in Table 1, police ranks range from police officers to sergeant, lieutenant, captain, superintendent, chief superintendent 4th class, chief superintendent 3rd class, chief superintendent 2nd class, chief superintendent 1st class, and the Chief of General Directorate of Security. At the top of this structure, the Chief of General Directorate of Security holds the highest authority followed by the chief superintendent 1st class who commands each of the 81 provincial directorates of police and is responsibile to the Chief of General Directorate of Security for all matters. Provincial directorates are also divided

into district police commands headed by 3rd class chief superintendents or 4th class chief superintendents (Durmaz, 2007) (see Appendix B).

Table 1. Personnel Information

Management Levels	Rank	Total
High Command Staff	Chief of General Directorate of Security	1
	Chief Superintendent 1st class	1,015
	Chief Superintendent 2nd class	654
Middle Level Supervisors	Chief Superintendent 3rd class	883
	Chief Superintendent 4th class	1,448
	Superintendent	3,208
First Level Supervisors	Captain	2,096
	Lieutenant	2,757
	Sergeant	2,256
Line Level Personnel	Police Officers (constable)	179,522
Total		193,840

Source: Department of Personnel─TNP (2009).

Police officers, first-level, and mid-level supervisors are the equivalent to sworn officers in the American system. In other words, they are different from civilian or nonsworn officers who usually conduct supportive or secondary duties such as typists or drivers, for example. Although officers who graduate from police training schools do not receive promotions, first-level and mid-level supervisors who graduate from the Turkish Police Academy may get promoted in time. First-level supervisors include sergeants, lieutenants, and captains, whereas mid-level supervisors are comprised of superintendents, chief superintendent 4th class, and chief superintendent 3rd class.

Due to its national, centralized, and multi-jurisdictional characteristics, the TNP is considered to be a unique organization in which all units and departments reflect the same mentality in terms of policing applications. Training, education, and even

recruitment have the same characteristics in all departmental jurisdictions due to laws that regulate policing practices (Sever, 2005). As Buker and Dolu (2009) emphasized,

> Centrality of the management gives a little discretion to the local police chiefs to implement their own policies, which, in turn, brings uniformity to the policing all around the country. Routine rotation of the police officers across the jurisdictions and regions of the country, and almost standard payment in all jurisdictions are other elements increasing the uniformity of social context within the TNP (p. 12).

Owing to TNP's organizational uniqueness and the lack of literature regarding its organizational commitment, we do not know whether the same factors that affect other public organizations or police agencies can apply to my study or whether there are other specific factors to becoming a police officer or supervisor that will affect his or her organizational commitment. Thus, these issues are empirically examined and shed new light on the multidimensional concept of organizational commitment.

Cultural Context

Cultural diversity sometimes demands that distinct factors are needed in different scenarios. For example, all organizations−including police agencies−develop a culture that is specific to the individuals who work with them (Schneider, 1987). According to Paoline and Terrill (2005), traditional characterizations of the police culture focus on the widely shared attitudes, values, and norms that officers use to collectively cope with the strains that originate in their occupational and organizational environments. For example, officers can be categorized as proculture, midculture, or conculture. Proculture officers are trapped in the traditional police culture that holds masculinity and an "us vs. them"

mindset, whereas conculture officers reject those attitudes, and midculture officers remain somewhere in the middle.

Similar to the differences observed in the dimensions between groups of police officers within an organization, differences between countries based on national culture can also be expected. Because commitment studies related to policing (Beck & Wilson, 1997; Dick & Metcalfe, 2001; Jenks, Carter, & Jenks, 2007; Maanen, 1975) have been conducted primarily in other than non-Western countries (i.e., the United States and Australia), their findings may not be applicable to all police organizations, especially those that are significantly different from the American culture. While national cultures have their own specific attributes, Ronen and Shenkar (1985) found evidence that there are also clusters of nations where geographic locations serve as the basis of the cluster. Therefore, the findings of my study have particular significance to other police organizations that operate within this type of environment and culture.

According to Dickson, Hartog, Deanne, and Mitchelson (2003), one of the most popular scholars in the literature related to cultural variation and the dimension-based approach to assessing and classifying cultures is Hofstede (1980). Hofstede maintained that cultural differences are primarily encountered as differences in shared values defined as “broad tendencies to prefer certain states of affairs over others” (p. 15). Hofstede (2001) further defined culture as the collective programming of the mind that distinguishes members of one human group from another and pointed out that culture is not a property of the individuals, but of groups.

Hofstede (1980, 2001) proposed five cultural dimensions: (a) power distance, (b) uncertainty avoidance, (c) individualism-collectivism, (d) masculinity-femininity, and (e) future orientation. Power distance was defined as the extent to which a society accepts the fact that power in institutions and organizations is unequally distributed (Hofstede, 1980). In cultures where there are large differences in power between individuals, organizations will have more layers and the chain of command will be felt to be more important (Dickson et al., 2003). Hofstede (1980) described uncertainty avoidance as the extent to which a society feels threatened by uncertain and ambiguous situations by providing career stability, establishing more formal rules, not tolerating deviant ideas and behaviors, and believing in absolute truths and attainment of expertise. According to Dickson et al. (2003), this dimension has several large implications for societies. They argued that uncertainty-accepting societies are more innovative than uncertainty-avoiding societies. Out of Hofstede's five dimensions, individualism and collectivism are perhaps the most widely investigated cultural syndromes (Wasti, 2003). According to Hofstede (1980), individualism implies a loosely knit social framework in which people are expected to take care of only themselves and their immediate families, while collectivism is characterized by a tight social framework in which people distinguish between in-groups and out-groups. The main difference between these two social frameworks lies with respect to the concept of self. While the definition of self is independent in individualistic cultures, the term is interdependent in collectivist cultures. In addition, Hofstede described a culture dimension referred to as masculinity versus femininity. Masculinity focuses on dominant values in a society that stress assertiveness and being

tough, the acquisition of material things, and not caring for others, relationships, quality of life, or people. On the other hand, in feminine cultures, values such as close social relationships, quality of life, and care for the weak are stressed. The final dimension, future orientation, referred to the level of importance that a society attaches to behaviors that include planning, investing, and delaying gratification (Hofstede, 2001).

As a country that occupies a unique position between Europe and the Middle East, Turkey can be characterized as being in transition from a rural, agricultural, patriarchal society to an increasingly urbanized, industrialized, and egalitarian country (Wasti, 2003). Hofstede (1980) described the Turkish culture as being high on collectivism and power distance. To determine the cultural level value dimensions in a survey comprised of 34 cultures, Schwartz (1990) found that Turkey ranked above average in conservatism, hierarchy, egalitarian commitment, and harmony. In a later study that included seven countries wherein paternalism was used as one of four sociocultural dimensions, Kanungo and Aycan (1999) found Turkey to carry more paternalistic values as opposed to the relatively less paternalistic cluster of Canada and the United States.

Another more comprehensive study relating to the Turkish culture was conducted as part of a GLOBE study. Findings indicated that among 62 cultures, two predominant Turkish characteristics included in-group collectivism and power distance (Kabasakal & Bodur, 1998). According to social culture rankings of the GLOBE study, Turkey was below average on gender egalitarianism, uncertainty avoidance, performance orientation, societal collectivism, human orientation, and future orientation but was higher in terms of in-group collectivism, power distance, and assertiveness (Kabasakal & Bodur, 1998).

Kabasakal and Bodur (2002) later summarized that dimensions of paternalism, respect for authority, and loyalty to the group and group members together suggested a cultural environment that is highly dependent upon relationships in the Turkish culture. For example, communication was found to be a goal for the people−not a tool. Based on these statements and among other elements, loyalty and respectful relationships can be accepted in the Turkish culture with respect to collectivist characteristics.

Research Questions

1. To what extent are selected personal characteristics (i.e., tenure, education, number of children, and marital status) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?
2. To what extent are job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?
3. To what extent is the Motivating Potential Score (MPS) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?
4. Does the Growth Need Strength (GNS) moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

5. To what extent are role related characteristics (role ambiguity, role conflict, and role overload) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

6. To what extent is each job satisfaction facet (overall, intrinsic, extrinsic) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

7. Does overall job satisfaction mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

8. Is there a significant difference between first and mid-level supervisors and police officers who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

9. Is there a significant difference between females and males who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

Definition of Terms

Affective Commitment

Affective commitment refers to an employee's emotional attachment to, identification with, and involvement in the organization. Employees who demonstrate a strong affective commitment continue employment with the organization because they want to do so.

Continuance Commitment

Continuance commitment refers to an awareness of the costs associated with leaving an organization. Employees whose primary link to the organization is based on continuance commitment remain with the organization out of their need to do so.

Normative Commitment

Normative commitment reflects a feeling of obligation to continue employment. According to Meyer and Allen (1997), employees who demonstrate a high level of normative commitment feel that they ought to remain within the organization.

Job Characteristics

Job characteristics consist of five core job dimensions (skill variety, task identity, task significance, autonomy, and job feedback) that improve employee work motivation, satisfaction, organizational commitment, and performance when present in a job (Hackman & Oldham, 1976).

Skill Variety

Skill variety is the degree to which a job requires a variety of different activities in carrying out the work that involves an employee's use of a number of different skills and talents.

Task Identity

Task identity is the degree to which a job requires completion of a whole and identifiable piece of work, or in other words, completing a job from beginning to end with a visible outcome.

Task Significance

Task significance is the degree to which the job has a substantial impact on the lives or work of other people−whether in the immediate organization or in the external environment (Hackman & Oldham, 1975).

Autonomy

Autonomy is the degree to which the job provides the employee with substantial freedom, independence, and discretion in scheduling the work and in determining the procedures to be used in carrying out the work.

Job Feedback

Job feedback is the degree to which carrying out work activities required by the job results in the employee obtaining direct and clear information regarding the effectiveness of his or performance environment (Hackman & Oldham, 1975).

Intrinsic Job Satisfaction

Intrinsic job satisfaction involves an individual's attitude toward his or her job based on internal factors such as type of work, achievement, and ability utilization (Weiss Dawis, England, & Lofquist, 1967).

Extrinsic Job Satisfaction

Extrinsic job satisfaction describes an individual's attitude toward his or her job based on external or environmental factors (Weiss et al., 1967).

General (Overall) Job Satisfaction

General job satisfaction expresses an individual's attitude toward his or her job in relation to his or her attitude toward life in general (Weiss et al., 1967).

Role Characteristics

Generally, role characteristics are discussed in terms of role conflict, role ambiguity, and role (work) overload (Acquino et al., 1997; Jackson & Schuler, 1985; James & James, 1989; Mathieu & Zajac, 1990).

Role conflict is defined in terms of the dimensions of congruency-incongruency or compatibility-incompatibility in the role requirements where congruency or compatibility is judged relative to a set of standards or conditions that impinge upon role performance (Rizzo, House, & Lirtzman, 1970).

Role ambiguity reflects certainty in regard to duties, authority, allocation of time, and relationships with others; the clarity or existence of guides, directives, policies; and the ability to predict sanctions as outcomes of behavior (Rizzo et al., 1970).

Role overload is defined as the sheer volume of work required from an employee (Spector & Jex, 1998).

Motivating Potential Score (MPS)

Motivating Potential Score (MPS) is the result of the equation where the values of each of the variables are measured using the Job Diagnostic Survey (JDS): MPS= [(skill variety + task identity + task significance)/3]*autonomy*feedback (Hackman & Oldham, 1976).

Growth Need Strength (GNS)

Growth Need Strength (GNS) is the personality variable that describes the extent to which people have a high need for personal growth and development on the job (Greenberg & Baron, 2003; Hackman & Oldham, 1975).

Organization of the Study

Chapter 1 provides an introduction, background for the research questions, research problem, purpose of the study, significance of the study, research questions, general information regarding the Turkish National Police, and definitions of selected variables as they relate to the survey research study conducted.

Chapter II provides a review of the literature on organizational commitment, job satisfaction, Hackman and Oldham's five core job characteristics, and TNP's role and personal characteristics. The literature review is organized in the following manner. A general description of organizational commitment is followed by an examination of a multidimensional construct of organizational commitment. In addition, the three components of organizational commitment, a related topic, and job satisfaction are

reviewed. The job satisfaction variable will first be discussed in general, followed by a further examination regarding facets of intrinsic and extrinsic job satisfaction based on related job satisfaction theories. The variables that include job and role characteristics are initially discussed in general terms followed by a more detailed examination of organizational commitment. Job characteristic variables are discussed based more especially on the Job Characteristics Model. Research on selected personal characteristics is also discussed in the second chapter.

Chapter III provides an overview of the research design and methodology that are utilized to conduct my study. In particular, selection of the sample, instrumentation, measures, data gathering procedures, VCU's Institutional Review Board (IRB) process, and a brief discussion of statistical techniques are addressed.

Chapter IV presents the results of the quantitative data analysis procedures outlined in Chapter III. Finally, Chapter V includes a detailed discussion of the findings and implications related to Allen and Meyers' (1997) revised 3-component model of organizational commitment. Next, limitations of my study are presented followed by recommendations for future research and final conclusions.

CHAPTER II

LITERATURE REVIEW

Although organizational commitment has been defined and operationalized in a number of ways, researchers have commonly noted that consensus regarding a precise definition of commitment does not exist (Morris, Lydka, & O'Creevy, 1993). For example, some viewed commitment to the organization as the strength of involvement one has with the organization (Brown, 1969; Hall & Schneider, 1972; Mowday et al., 1979) whereas others suggested that commitment is shown through congruence between personal and organizational goals and values (Buchanan, 1974). As the construct has developed and evolved over the years, researchers from various disciplines have actually ascribed their own meanings (Mowday et al., 1982). In order to point out the general lack of agreement in defining organizational commitment, a sample of the various definitions is first provided before reviewing the nature and antecedents of the term.

Definitions of Organizational Commitment

No one definition in the literature that describes organizational commitment is more correct or universally accepted than another. Although definitions appear to be different from each other in general, they reflect three main themes that can be labeled as (a) *affective orientation*, (b) *cost-based commitment*, and (c) *obligation* or *moral responsibility*. While *affective orientation* definitions are related more toward psychological or affective attachment to an organization, *obligation* or *moral responsibility* definitions are based on the normative perspective of organizational

commitment (Meyer & Allen, 1991; Meyer & Allen, 1997). On the other hand, *cost-based* commitment definitions focus mainly on a structural phenomenon that occurs as the result of individual-organization transactions and alterations over time (Hrebeniak & Alutto, 1972).

Affective Orientation

Organizational commitment was initially defined in terms of affective orientation attachment. According to Kanter (1968), commitment refers to "the willingness of social actors to give their energy and loyalty to social systems, the attachment of personality systems to social relations which are seen as self-expressive" (p. 499) and involves "the process through which individual interests become attached to the carrying out of socially organized patterns of behavior which are seen as fulfilling those interests, as expressing the nature and needs of the person" (p. 500). According to Sheldon (1971), organizational commitment represents "an attitude or an orientation toward the organization which links or attaches the identity of the person to the organization" (p. 143). Hall et al. (1970) described organizational commitment as the "process by which the goals of the organizations and those of the individual become increasingly integrated and congruent" (p. 176), whereas Salancik (1977) viewed the term as a state of being in which an individual becomes bound by actions to beliefs that sustain activities and involvement.

Within the same concept, Buchanan (1974) considered organizational commitment to be "a partisan, affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its sake apart from its purely instrumental worth" (p. 533). Finally, Mowday et al. (1982)

defined organizational commitment as “the relative strength of an individual’s identification with and involvement in a particular organization” (p. 27). Such commitment can generally be characterized by at least 3 factors: (a) a strong belief in and acceptance of the organization’s goals and values; (b) a willingness to exert considerable effort on behalf of the organization; and (c) a definite desire to maintain organizational membership (Porter et al., 1974).

In addition to the aforementioned scholars, O’Reilly and colleagues (Caldwell, Chatman, & O’Reilly, 1990; O’Reilly & Caldwell, 1981; O’Reilly & Chatman, 1986; O’Reilly, Chatman, & Caldwell, 1991) viewed organizational commitment as an individual’s psychological attachment. They argued that although various differences in the definition of commitment exist, a central theme that continues to appear is the individual’s attachment to his or her organization or the psychological bond that links the individual to the organization. However, they claimed that the nature of the bond can differ. More specifically, they believed that the psychological bond between the employee and the organization can take on different forms that are labeled as compliance, identification, and internalization, to be discussed later in detail.

Cost-based Commitment

Another category of organizational commitment is considered in terms of exchange or reward-cost notions. The key point here is bargaining or exchanging relationships between the employee and the organization. In other words, the more that rewards are perceived by employees, the greater the organizational commitment (Hrebeniak & Alutto, 1972). Based on Becker’s (1960) side bet theory, Hrebeniak and

Alutto described organizational commitment as a "structural phenomenon which occurs as a result of individual-organizational transaction and alterations in side bets or investment over time" (p. 556). The term side bet refers to the accumulation of investments valued by the individual that would be lost should the individual leave the organization. According to Becker (1960), "commitment comes into being when a person, by making a side bet, links extraneous interests with a consistent line of activity" (p. 32). As Hrebeniak and Alutto pointed out, Becker's concept refines the simple exchange model by introducing the element of time and the idea of side bet or the investment quality of organizational participation. In terms of the cost-based concept, Kanter (1968) described organizational commitment as "profit associated with continued participation and costs associated with leaving" (p. 504).

Obligation or Moral Responsibility

By taking the obligation or moral responsibility approach, organizational commitment is viewed as the totality of internalized normative pressures to act in a way that meets organizational goals and interests (Wiener, 1982). From this point of view, commitment behaviors are socially accepted ones that exceed formal and/or normative expectations relevant to the object of commitment (Wiener & Gechman, 1977). Hall, Schneider, and Nygren (1970) viewed organizational commitment as the process by which the organization's goals and those of the individual become increasingly integrated and congruent. Scholars who support the obligation or moral responsibility approach generally observe a strong reciprocal set of obligations between the organization and the employee. For example, the committed individual considers it morally right to remain in

the organization without thinking about how much status enhancement or satisfaction is given by his or her organization (Marsh & Mannari, 1977).

The organizational commitment literature indicated that there are various definitions that reflect three broad themes, and the differences are not merely semantic. The lack of a common unique definition might stem from the fact that commitment is a first level construct that is also used in everyday language (Meyer et al., 1989). Due to the wide variety of manners in which the construct of organizational commitment has been defined, it is necessary to go beyond a definition to describe the term.

The Nature of Organizational Commitment

In order to provide clarity to the concept of organizational commitment, researchers have studied the nature of commitment by types, forms, and components (Mowday et al., 1982; Meyer & Allen, 1991; Meyer & Allen, 1997). However, organizational commitment has been complicated by the fact that researchers have worked under differing assumptions concerning the nature of commitment (Allen & Meyer, 1987).

The two predominant approaches of organizational commitment that have had the greatest impact on theory and research include the attitudinal approach and the behavioral approach (Angle & Perry, 1981; Ferris & Aranya, 1983; Meyer & Allen, 1984; McGee & Ford, 1987; Mowday et al., 1982; Salancik, 1977). In general, the attitudinal approach (also termed as rational, attitudinal school, or attitudinal commitment) (Porter et al., 1974; Steers, 1977) views commitment as an employee’s attitude or, more specifically, as a set of behavioral intentions such as the desire to remain with the organization and an

identification with the organization's goals. Positive work experiences, personal characteristics, and job characteristics are some antecedents of these intentions (Scholl, 1981). On the other hand, the behavioral approach (also termed as behavioral, social psychological, or irrational school) (Scholl, 1981) points out that commitment relates to the process by which individuals become locked into a certain organization and how they deal with the problem (Mowday et al., 1982).

The Attitudinal Perspective

Attitudinal commitment developed largely out of the works of Buchanan (1974), Porter et al. (1974), Mowday et al. (1982), and O'Reilly and Chatman (1986). All of these scholars characterized the construct as a psychological attachment to the organization driven by an employee's identification and involvement with the organization. However, inconsistencies across their research exist and are thus potentially problematic. In other words, although there has been agreement as to the fundamental basis of attitudinal commitment, there has not been a common consensus reached on how to operationalize the concept (Jaussi, 2007).

From an attitudinal perspective, commitment can be seen as an affective response (attitude or orientation) resulting from an evaluation of the work situation that links or attaches the employee to the organization (Mottaz, 1989). For example, Porter et al. (1974) described commitment as the relative strength of an individual's identification with and involvement in a particular organization. Such commitment can be conceptually characterized by at least three factors: "(a) a strong belief in and acceptance of the organization's goals and values; (b) a willingness to exert considerable effort on behalf of

the organization; and (c) a definite desire to maintain organizational membership" (p. 604).

Based on Porter et al.'s (1974) statements, commitment is considered to be a positive orientation that entails identification with, involvement in, and a sense of loyalty to the organization. Such commitment or attitude of attachment is assumed to lead to particular work-related behaviors including higher levels of job performance and low rates of absenteeism and turnover (Mottaz, 1989). Advocates of the attitudinal approach argue that employees who are highly committed to an organization's goals and who are willing to devote a great deal of energy toward these ends would be most likely stay with the organization in an effort to assist in the realization of such highly valued objectives (Porter et al., 1974). Porter et al.'s attitudinal approach to commitment served as the basis for the development of the widely used research instrument, Organizational Commitment Questionnaire. Researchers who support the attitudinal commitment approach have focused primarily on identifying factors that contribute to the development of attachment and its possible impact on organizational behavior (Meyer & Allen, 1987).

As Mowday et al. (1982) pointed out, when organizational commitment is viewed from Porter et al.'s (1974) perspective, the construct represents a notion beyond mere passive loyalty to an organization that includes an active relationship with the organization in that employees are willing to give of themselves for the organization's well-being. For this reason, commitment can be inferred not only from the expressions of an employee's beliefs and opinions but also from his or her actions. In addition, Steers (1977) suggested that it may be more meaningful to distinguish between passive and

active commitment with passive commitment favoring affective responses to the organization and active commitment favoring behavioral intentions such as an employee's willingness to exert high levels of effort on behalf of the organization. Important to note, Porter et al.'s (1974) attitudinal commitment approach does not mean that the individual will be committed to only his or her organization rather than to other environmental aspects (i.e., family, union, political party etc.). Instead, the approach emphasizes that regardless of other possible commitments (Mowday, 1982), the individual who is organizationally committed will tend to show the three characteristics identified by Porter et al. (1974).

Buchanan (1974), another attitudinal commitment scholar, also regarded commitment as affective attachment to the organization's goals and values, to one's role in relation to goals and values, and to the organization for its own sake apart from its purely instrumental worth. Buchanan (1974) distinguished three components referred to as (a) identification, (b) involvement, and (c) loyalty. Identification represents internalization of the organization's goals and values, while involvement refers to the psychological immersion or absorption in the activities of one's work role. Finally, loyalty is a feeling of affection for attachment to the organization. The definitions of identification and loyalty are held in common with other attitudinal commitment scholars, namely Porter et al. (1974), Mowday et al. (1982), and Steers (1977). Although involvement was also similarly described by these scholars, there are still differences between their observations of involvement. For example, Buchanan (1974) viewed involvement as a form of satisfaction obtained from an employee's work and activities

performed in the job role. Basically, this view is similar in conception to one aspect of Lodahl and Kejner`s (1965) scale of job involvement and to Hackman and Oldham's (1976) internal work motivation scale (Cook & Wall, 1980). On the other hand, Porter et al.'s (1974) alternative view represents a high level of effort in the job on behalf of the organization. As Cook and Wall (1980) asserted, the main difference between the two approaches to involvement is "whether or not a person's involvement with his work goes beyond the job itself such that he works hard both for his own satisfaction and for the sake of organization" (p. 40).

Based on Kelman's (1958) processes of attitude change, O'Reilly and Chatman (1986) proposed an alternative model and measure of attitudinal organizational commitment that is somewhat different but not incompatible with other attitudinal commitment scholars such as Mowday et al. (1982) and Porter et al. (1974). Like these scholars, O'Reilly and Chatman (1986) stated that organizational commitment is an individual's psychological attachment that ties him or her to the organization, but the nature of the attachment or bond can differ. Following Kelman`s (1958) work, O'Reilly and Chatman (1986) argued that psychological attachment between an individual and an organization can be comprised of three different forms: (a) compliance, (b) identification, and (c) internalization. O'Reilly and Chatman further described commitment as the basis for one's psychological attachment to an organization that may be predicted by three independent foundations: (a) compliance or instrumental involvement for specific, extrinsic rewards, (b) identification or involvement based on a desire for affiliation, and (c) internalization or involvement of congruence between individual and organizational

values. The aspects of commitment proposed by O'Reilly and Chatman (1986) will be discussed later in detail under the multidimensional nature of organizational commitment.

The Behavioral Perspective

In contrast to the attitudinal view of commitment, the behavioral approach was based on a social psychological perspective that was primarily concerned with the process by which individuals develop a sense of attachment to their own actions rather than to an organization (Becker, 1960; Salancik, 1977). In this approach, employees are observed as becoming committed to a particular course of action as opposed to an entity (Meyer & Allen, 1997). While the attitudinal approach uses commitment to explain performance and membership, the behavioral approach generally focuses on employee membership decisions. The concept of investments is an important tool for the behavioral approach to explain membership and in doing so implicitly defines commitment as a type of force that directs one's individual behavior (Scholl, 1981).

The difference between the two approaches is very clear in terms of focusing on research. Whereas research related to the attitudinal approach is generally related to discovering the antecedents of organizational commitment that contribute to its development and behavioral commitment outcomes, research directed toward the behavioral approach is often focused on identifying the conditions under which a behavioral pattern tends to be repeated as well as the effects of such behavior on attitude change (Meyer & Allen, 1991). The goal of research related to attitudinal commitment is to find that results of strong commitment will include lower absenteeism, lower turnover, and higher productivity and to determine which organizational characteristics, personal

characteristics, and conditions or job-related variables (e.g., job satisfaction, lower job stress) contribute to the development of high commitment. On the other hand, the main goal of research that is directed toward behavioral commitment is to determine the conditions in which employees become committed to the organization (Mathieu & Zajac; 1990; Meyer et al., 1993; Somers, 1995; Steers, 1977).

The origins of behavioral commitment lie principally in the works of Becker (1960), Kiesler (1971), and Salancik (1977). A major theory underlying behavioral approach is Becker's (1960) side bet theory (often termed exchange theory). From this perspective, commitment is a function of a cognitive evaluation of the costs and benefits involved in maintaining organizational membership (Ogilvie, 1986). Becker described commitment as the disposition to engage in consistent lines of activity as a result of the accumulation of "side bets" that would be lost should the activity be discontinued. In other words, the side bet theory assumes that commitment becomes a reality when a person links an extraneous interest with a consistent line of activity by making a side bet. Becker concentrated on what he labeled the "side bets" theory that attempts to explain the process by which employees attach themselves to organizations through personal investments, namely effort, time, friendship, tenure, promotion, career, and financial gain. However, Becker argued that these investments come with costs that, to some degree, reduce an employee's freedom of future activities. Through personal investments, employees become locked into their organizations due to the costs incurred upon leaving (e.g., pension funds, firm specific knowledge, and seniority).

According to Stevens, Beyer, and Trice (1978), the employee becomes organizationally committed. For instance, an employee may reject an offer to change his or her job even though the proposed one would provide a higher salary, because a large pension would either be lost by the move or pay the price of making friends and adjusting to new supervisors. This example indicates that the employee becomes attached to the organization not because he or she identifies with the organization's goals and values but because of the costs involved by leaving. In this case, the employee shows behavior commitment that reflects a decision to remain in the organization due to investments that have forfeiture implications (Mottaz, 1989).

On the other hand, if other occupational investments such as time or identification are made, then the side bet mechanism yields occupational commitment (Stevens, Beyer, & Trice, 1978). According to Wallace (1997), if employees have few possible alternatives regarding an alternative job or career, commitment to their current organization and career is strengthened. Thus, commitment increases as more side bets are accumulated and if they are contingent on continued employment in the organization (Becker, 1960; Meyer & Allen, 1984; Ritzer & Trice, 1969).

Scholars have tested and criticized Becker's (1960) work in that the side bet theory identifies only the employee's behavior, whereas commitment is seen as an exchange between the employee and the organization for certain rewards or payments (Mowday et al., 1979). The research conducted to test Becker's side bet theory has been cross sectional in design. In other words, to test the side bet theory assumes that the more investments an employee has put into an organization, the lower will be his or her

tendency to leave. Thus, high investment members have been compared to low investment members with respect to their inclination to leave an organization (Scholl, 1981). Ritzer and Trice (1969) initially conducted research using the cross sectional design by approaching the relationship between occupational and organizational commitments among personnel managers. In their research, respondents were asked if they would definitely change, were undecided, or would definitely not change their employment organizations and occupations given specific incentives. Hypotheses were then tested concerning the relationship between commitment and different background factors such as age, marital status, salary, et cetera that they considered as being indicators on the number of side bets. Using commitment scores in subsequent analyses did not indicate a significant relationship with variables central to the side bet theory thus leading Ritzer and Trice to conclude that the side bet theory of commitment should be rejected (Alutto, Hrebiniak, & Alonso, 1973; Aranya & Jacobson, 1975; Hrebiniak & Alutto, 1972; Scholl, 1981). As an alternative to the side bet theory, Ritzer and Trice suggested that rather than being a structural phenomenon, occupational and organizational commitment is a psychological concept based on the subjective meaningfulness of an occupation and an organization (Aranya & Jacobson, 1975). Although researchers who have designed studies that test the side bet theory have generally indicated that the side bet concept of commitment is not a useful one, the organizational commitment literature refers to at least three limitations of past side bet research. First, most tests of the side bet theory have used indirect measures. Wallace (1997) argued that using direct measures of side bets would be more useful in order to

observe if they improved the explanatory power of the side bet model over models that rely on traditional measures.

Second, Cohen and Lowenberg (1990) stated that all 50 of the side bet research included in their meta-analysis used affective measures of commitment. However, Meyer and Allen (1984) considered commitment to be more consistent with Becker's (1960) side bet model. Similarly, Stebbins (1970) asserted that the commitment which Ritzer and Trice (1969) dealt with to test the side bet theory was value commitment. In other words, this type of commitment can be described as a frame of mind that arises from the presence, in exceptional numbers, of subjectively defined rewards associated with a particular position or social identity in which the person finds himself/herself or hopes to find himself/herself. In the study of value commitment, these defined rewards can only provide an answer to the question, "What attracts an individual to a given position?" However, it is clear that Becker's side bet theory is not a theory of value commitment as Ritzer and Trice believed but rather is viewed as a theory of continuance commitment (Stebbins, 1970). Third, and finally, researchers who have failed to find strong support for the side bet theory have often examined organizational commitment and have not focused on whether personal investments are relevant to occupational commitment (Wallace, 1997).

When a comparison was made between attitudinal and behavioral approaches to organizational commitment, the literature indicates that more attention has been given to the attitudinal approach (Mathieu & Zajac, 1990) stemming mainly from the lack of a valid measure of Becker's (1960) side bet model with respect to behavioral commitment

(McGee & Ford, 1987; Stebbins, 1970; Wallace, 1997). For instance, Ritzer and Trice's (1969) scale as well as Hrebiniak and Alluto's (1972) scale did not find support in the behavioral approach and Becker's side bet model as previously mentioned. As Meyer and Allen (1984) asserted, the instruments used to test the side bet theory may not measure commitment as Becker conceptualized.

Like Becker, Salancik (1977) recognized the need to distinguish between commitment from the organizational behavior perspective and commitment from a social psychological perspective. In a similar vein to Becker, Salancik viewed commitment as the binding of an individual to behavior acts. More specifically, Salancik argued that individuals who are free to behave in certain ways develop attitudes that are consistent with their choices (e.g., commitment behaviors lead to committing attitudes) (Pierce & Dunham, 1987).

According to Salancik (1977), to understand commitment, individuals must first understand that behavior is the act that is being committed given that behavior is a visible indicator of who individuals are and what they intend on doing. Their behavior leads to expectations about what they will do in the future, and these expectations surround the behavior and limits people to act on them. Thus, commitment shapes attitudes and maintains behavior even in the absence of positive reinforcements and tangible rewards. Salancik argued that three characteristics−visibility, irrevocability, and volitionality−bind a person to his or her acts and therefore commits him or her. By manipulating the three characteristics, a person can be made to be more or less committed to his or her acts and to their implications.

The first aspect of committing behavior concerns how visible and observable the commitment is (Salancik, 1977). Visibility is the perception that significant others are aware of an action (Kline & Peters, 1991). In other words, acts that are secret or unobserved lack the force to commit, because if an act is invisible, then it can be clearly linked to a person and an individual can either deny or forget it. Thus, commitment becomes crucial for persons in order to fulfill goals to which they agree. Factually, one of the simplest and easiest ways to provide organizational commitment is to make the agency's identification with the organization widely known and highly visible (Salancik, 1977). Because public acts are known to significant others such as family members, friends, and peers, behavior that is inconsistent with these acts has stronger psychological implications than behavior that is consistent with private acts. Thus, the more an individual perceives significant others to be aware of an act, the more committed the person should be to a future course of action consistent with the act (Kline & Peters, 1991).

Another characteristic of behavior in terms of commitment is the irreversibility of behavior. For example, if a behavior is only visible but not irreversible then that behavior would not be committing. Visibility means the person cannot deny that an action has occurred, but irrevocability means the behavior that occurred cannot be changed (Salancik, 1977) which refers to the perceived reversibility of an action (Kline & Peters, 1991). Salancik argued that the irreversibility or irrevocability of behavior is committing because in taking a step that cannot be retrieved, one is left to accept the salient implications that support it. Based on this assumption, individuals face either regret over

past actions in their lifetime or an assertion of their wisdom. For instance, a person who aims a loaded gun at another person and then fires ends up either hating himself or hating his victim. Obviously, few actions are so irreversible as shooting someone or so costly to reverse. Still, the more irreversible an action is, the more committing the action becomes.

Volition, the final aspect of behavior that is essential to all commitment, refers to the perception that an action has been undertaken out of free choice (Kline & Peters, 1991) and links the action to the individual and motivates people to accept the implications of their acts. Without volition, a behavior is not committing since the individual can always state that he or she did not really cause the behavior. Therefore, a person would not have to accept the results of the behavior or care very much about what he or she has done. As a matter of fact, volition is the easiest means of becoming set free from behaviors, especially those that result in disagreeable consequences. In addition, volition is the most ambiguous aspect of committing behavior. Unlike visibility and irrevocability, volition is not observable and cannot be documented but can be attributed either by the person or by others (Salancik, 1977). When perceived volition is high, a person generally feels more personally responsible for an action than when perceived volition is low. As a result, this person feels a need to justify the wisdom of choice made by behaving in a manner consistent with the choice (Kline & Peters, 1991).

In sum, Salancik (1977) viewed commitment as a psychological obligation to behave in a manner consistent with the implications of prior behavior. Thus, acts become committing and as a result, they limit future behavior to the degree that persons perceive them as undertaken by the exercise of free choice, not easily reversed, and known to

significant others. Those three conditions represent (a) high volition, (b) low irreversibility or revocability, and (c) high visibility (Kline & Peters, 1991).

Integration of the Two Perspectives

Although the aforementioned discussion indicated that the distinction between behavioral commitment and attitudinal commitment is meaningful, some scholars have argued that the two approaches are clearly interrelated. For example, while one approach deals with the influence of commitment attitudes on behaviors, the other focuses on the effects of commitment behaviors on attitudes (Mottaz, 1989). According to Mowday et al. (1982), one cannot assert that one approach is superior to the other; rather, it can be factually stated that both concepts are useful, and the two phenomena are closely related. Therefore, if a researcher is to make progress in understanding the commitment construct, it is necessary to consider both forms as they relate to each other and the broader issue of organizational behavior. Mowday et al. argued that rather than examining the casual relationship between attitudinal commitment and behavioral commitment as pointing either in one direction or the other, it is more logical to consider the two as reciprocally related over time.

According to this view, it is equally reasonable to assume that "(a) commitment attitudes lead to commitment behaviors that subsequently reinforce and strengthen attitudes; and (b) committing behaviors lead to commitment attitudes and subsequent commitment behaviors" (Mowday et al., 1982, p. 47). The important issue is not whether the commitment process begins with either attitudes or behaviors. Rather, of importance is to recognize that the development of commitment may include the reciprocal play of

attitudes and behaviors over time. To conclude, the basic theoretical orientation underlying the discussion in Mowday et al.'s (1982) approach is that the process of commitment is characterized by the reciprocal influence of attitudes and behaviors.

Similarly, Ogilvie (1986) asserted that commitment is viewed as an evaluation of the linkage between employees and organizations in both attitudinal and behavioral approaches. This evaluation is an attitude which includes cognitive and affective components that may be difficult to separate from each other. Therefore, instead of viewing these two approaches as distinct concepts of organizational commitment, they may be more reasonably considered as two related processes resulting in the same outcome or the formation of a bond to maintain membership. An interrelation of the two approaches was also suggested by DeCottis and Summers (1987), Kalleberg and Berg (1987), Steers (1977), and Yoon, Baker, and Ko (1994) who all considered commitment as the degree to which an employee identifies with the organization's goals and values and is willing to exert extra effort to help it succeed. Therefore, the investment of an employee's effort includes attitudes and intentional behaviors that lead to the organization's achievement goals.

In my study, I used the 3-component model of organizational commitment developed by Meyer and Allen (1991) that includes (a) affective, (b) continuance, and (c) normative commitment in which the interrelation of the attitudinal and behavioral approach exist. In fact, while affective commitment and normative commitment fall under the attitudinal continuum of organizational commitment, continuance commitment falls under the behavioral end of the continuum.

Multidimensional Nature of Organizational Commitment

Traditionally, organizational commitment has been described as a unidimensional construct by Porter et al. (1974) who viewed commitment as the relative strength of an individual's identification and involvement in a particular organization. Based on this perspective, organizational commitment was conceptualized by Porter et el. as a singular construct comprised of multiple attitudes on the part of an organization's employees such as loyalty to the organization, willingness to exert effort on behalf of the organization, congruence of individual goals and values with those of the organization, and a desire to maintain membership with the organization (Ketchand & Strawser, 2001). More specifically, their conceptualization used two factors that were discussed earlier: (a) attitudinal commitment or the way in which an employee's values fit with those of the organization, and (b) behavioral commitment or the way in which an employee is locked into an organization (Mowday et al., 1982). Although the objective of Porter et al.'s conceptualization was to establish causal connections for attitudinal commitment, causality could not be exactly established. Similarly, Mayer and Schoorman (1998) argued that Porter et al.'s (1974) unidimensional construct of organizational commitment did not clearly explain how an employee becomes committed to an organization. While Porter et al.'s unidimensional definition and organizational commitment questionnaire has been used in studies for many years, evidence suggests that employees develop commitment to a certain organization through multiple dimensions (Ketchand & Strawser, 1998).

Two-Dimensional Model of Organizational Commitment

Following Porter et al.'s (1974) view of commitment, subsequent researchers have identified and tested two separate dimensions of organizational commitment (Angel & Perry, 1981; Caldwell et al., 1990; Hunt & Morgan, 1994; Mayer & Schoorman, 1998; McGee & Ford, 1987) who credit March and Simon (1958) as being the earliest contributors to the 2-dimensional model of organizational commitment. As cited by Mayer and Schoorman (1992), March and Simon argued that an individual makes two distinct decisions regarding an organization: (a) one to participate, and (b) the other to produce or perform. An important implication of this view is that decisions made by employees to participate in an organization reflect considerations that are different from those decisions to produce. In other words, the considerations that lead to a participatory decision are based on the notion of exchange between employee and organization. On the other hand, the considerations that lead to the decision to produce comprise the strength of an employee's identification with the organization's goals and values.

Based on March and Simon's (1958) earlier perspective and using Porter et al.'s (1974) conceptualization of organizational commitment, Angel and Perry (1981) developed two distinct dimensions labeled as (a) value commitment and (b) commitment to stay. They described value commitment as an affective and positive connection with the organization that serves as the commitment to support the organizational goals. On the other hand, commitment to stay emphasizes the importance of the economic exchange between the employee and the organization or the commitment to retain organizational membership. Mayer and Schoorman (1992) identified commitment to stay as continuance

commitment defined as the desire to remain a member of the organization. In support of the viewpoints of March and Simon, Angel and Perry, and Mayer and Schoorman who defined value commitment as a belief in and acceptance of organizational goals and values and a willingness to exert considerable effort on the organization's behalf, they argued that an employee who exhibits a high value of commitment is motivated to produce, but an employee who has a high continuance commitment is motivated to participate. These researchers proposed that the two dimensions lead to distinct sets of organizationally relevant outcomes.

Three-Dimensional Model of Organizational Commitment

Although various researchers have developed 3-dimensional models of organizational commitment (Etzioni, 1961; Jaros et al., 1993; Kanter, 1968; Meyer & Allen, 1991; O'Reilly & Chatman, 1986; Penley & Gould, 1988), among the earliest works are those of Etzioni (1961) and Kanter (1968) who set the pace for data to be collected on commitment models that utilize three factors. Etzioni determined that three dimensions are related to organizational commitment with each representing an employee's response to organizational powers: (a) moral involvement, (b) calculative involvement, and (c) alienative involvement. Moral involvement is defined as a positive orientation of high density based on an employee's internalization and identification with organizational goals. Calculative involvement is described as either a negative or a positive orientation of low intensity that develops due to an employee receiving inducements from the organization that matches his or her contributions. Within calculative involvement, members view their contributions and rewards to the

organization as beneficial and equitable (Randal & O'Driscoll, 1997). Finally, alienative involvement is a negative orientation that is found in exploitative relationships (e.g., prisons, people in concentration camps, enlisted men in basic training, etc.). As Zangaro (2001) pointed out, employees perceive a lack of control or ability to change their environment in these situations and therefore remain in the organization only because they have no other options. Each dimension of this model represents a possible description of an employee's organizational attachment. Etzioni's (1961) model incorporates the attitudinal, behavioral, and normative aspects of organizational commitment.

Kanter (1968) also supported the notion that organizational commitment should be considered as a 3-dimensional model that includes three forms of commitment: (a) continuance, (b) cohesion, and (c) control. Kanter argued that even though one form of commitment may dominate, an employee would be subject to all of these commitments. Continuance commitment stems from the accumulated sacrifices and investments made by employees who come to realize that they have too much to lose by leaving the organization. Cohesion is the result of forming an attachment to social groups in the organization. Finally, control commitment exists when employees believe that the norms and values of their organization represent a suitable model to follow in guiding their own actions and work (Mowday et al., 1982). The 3-dimensional model proposed by Kanter can be observed as covering the major aspects of a personality system by linking the individual to a social system in such a manner as to articulate with other formulations concerning the willingness to carry out socially organized lines of behavior. Unlike

Etzioni (1961), Kanter (1968) viewed her 3-dimensional model of commitment as being highly interrelated by believing that organizations typically use each dimension simultaneously in order to develop member commitment. In Kanter's perspective, each of the three aspects of commitment can be seen as reinforcing the others because they jointly affect employees by increasing their binds to the organization. On the contrary, Etzioni (1961) suggested that influences on employee commitment fall largely into only one of three categories.

Following Etzioni's (1961) lead, Penley and Gould (1988) proposed multiple dimensions of organizational commitment. Their work was very similar to Etzioni's approach in defining organizational commitment as moral, calculative, and alienative. According to their definitions, moral commitment is the acceptance of and identification with organizational goals, calculative commitment is the exchange of organizational inducements for employee contribution, and alienative commitment is the consequence of a lack of control and perceived absence of alternatives. Penley and Gould (1988) focused on two predominant views of organizational commitment: (a) instrumental and (b) affective. They considered that the instrumental view related to a system of compensation and rewards received from employees in exchange for their accomplishments within an organization. On the other hand, the affective perspective related to an employee's level of emotional attachment and personal sense of obligation to carry out responsibilities within an organization. In Penley and Goul's view, Etzioni's calculative commitment was considered to be an instrumental form of organizational commitment, and moral and alienative commitments were affective forms of

organizational commitment. Penley and Gould's study provided empirical evidence that these three dimensions of commitment exist in an organization, and employees have a mixture of commitment types (Zangora, 2001).

Based on Kelman's (1958) earlier processes of attitude change, O'Reilly and Chatman (1986) developed three distinct dimensions of organizational commitment labeled as (a) compliance, (b) identification, and (c) internalization. According to O'Reilly and Chatman, each independent dimension represented a different motivation for identifying with an organization and its goals. As a basis for commitment, compliance results in the lowest level of organizational commitment (Becker, 1992; Becker et al., 1996) and occurs when employees' attitudes and behaviors are accepted out of a desire to gain a specific reward and avoid punishment rather than a personal belief in the organization. In this case, public and private shared beliefs may differ. Identification represents a higher degree of commitment (Becker, 1992; Becker et al., 1996), or in Kelman's terms, occurs when an individual accepts an influence in order to establish or maintain a satisfying relationship. For example, an individual may feel proud to be part of a group who respects its values and accomplishments but does not adopt them as his or her own. Finally, internalization occurs when people accept attitudes and beliefs because their content is congruent with their own value systems (O'Reilly & Chatman, 1986). The highest level of commitment is based on internalization according to O'Reilly and Chatman's view (Becker, 1992; Becker et al., 1996). However, the delineation of organizational commitment by Mowday et al. (1982) and Porter et al. (1974) and

affective commitment by Meyer and Allen (1991) refer to the higher levels of commitment, identification and internalization (Becker, 1992).

Although O'Reilly and Chatman's (1986) approach to commitment served to sensitize scholars into thinking about the concept of multidimensional commitment, their classification has been weakened by the difficulty of distinguishing identification and internalization (Caldwell et al., 1990; Vanderberg, Self, & Seo, 1994). The literature indicates two major concerns concerning O'Reilly and Chatman's (1986) initial work. First is the lack of basic reliability and validity information on the scales that operationalized the attachment constructs. Their work indicated that internalization and identification measures are indistinguishable and can be treated as one scale even though some researchers (e.g., Becker, 1992) apply them separately as originally proposed (Vanderberg et al. 1994). Due to information regarding the measures of O'Reilly and Chatman (1986), normally a careful examination of each underlying reliability and validity measure is needed. Such information plays a key role in preventing misuse or misapplication of the measures, and in general, determining limitations in similar research attempts (Vanderberg et al. 1994).

Second, the measures tend to highly correlate with one another and thus indicate similar patterns of correlations with measures of other variables (Harris, Hirschfeld, Field, & Mossholder, 1993). For instance, compliance appears to have relationships with several variables that are opposite to those of identification and internalization and reflect attachment that is in some sense fundamentally counter to that reflected by compliance. Based on concerns and critics, O'Reilly and Chatman's (1986) three independent

foundations for commitment were later collapsed into two categories by Caldwell et al. (1990) who combined identification and internalization items to form a measure that they labeled as normative commitment. However, it is important to note that this should not be confused with Meyer and Allen's (1991) normative commitment that will be explained later. In addition, Caldwell et al. labeled compliance as instrumental commitment that is totally different from identification and internalization. However, Meyer and Allen (1997) argued that compliance or instrumental commitment may not be considered as commitment because first, it is distinct from the common definitions of commitment mentioned above, and second, it is considered by some to be antithesis of commitment. For example, Scholl (1981) stated that commitment serves to maintain behavior in the absence of reward. Although commitment is generally assumed to reduce turnover, O'Reilly and Chatman (1986) also found a positive relationship between compliance and turnover. Therefore, by including compliance as a basis for commitment invites confusion (Meyer & Allen, 1997).

Jaros et al. (1993) also made attempts to identify and measure different forms of organizational commitment. Like others, they believed that unidimensional model of Porter et al. (1974) was limited in its scope. Therefore, Jaros and his associates suggested a multidimensional conceptualization of commitment. Specifically, they distinguished between affective, continuance, and moral commitment. Affective commitment refers to the degree to which an employee is psychologically attached to an organization through feelings of loyalty, affection, warmth, belongingness, fondness, and pleasure, to name a few. Continuance commitment is the degree to which an employee experiences a sense of

being locked into place due to the high cost of leaving. Finally, moral commitment is the degree to which an employee is psychologically attached to an organization through internalization of its goals, values and, mission. Jaros et al.'s view appears to be similar to that of Meyer and Allen (1991); there are differences in terms of affective and moral commitment. For example, only in the case of continuance commitment did their conceptual definitions match (Meyer & Hersovich, 2001).

The most popular multidimensional model of organizational commitment is that of Meyer and Allen (1984) based on Becker's (1960) earlier study of the side bet model (McDonald & Makin, 2000). Meyer and Allen initially introduced two dimensions of organizational commitment: (a) affective attachment or affective commitment and (b) cost attachment or continuance commitment. Thus, organizational commitment is considered to be a bidimensional concept that includes an attitudinal aspect as well as a behavioral aspect. After continued research, Meyer and Allen (1991) added another dimension labeled obligation or normative commitment. Therefore, they held that organizational commitment is a multidimensional construct comprised of three components−affective, continuance, and normative−that is discussed fully in the next section and are used to guide my current study.

The aforementioned discussion has indicated that there are differences in the dimensions and forms or components of organizational commitment as described in the various multidimensional conceptualizations of organizational commitment. These differences stem from the various motives and strategies involved in the development of the multidimensional frameworks that are summarized in Table 2 for easier comparison.

Table 2. Dimensions of Organizational Commitment within Multidimensional Models

Etzioni (1961)	Dimensions
Moral Involvement	A positive and high-intensity orientation based on internalization of organizational goals and values and identification with authority
Calculative Involvement	A lower-intensity relationship based on a rational exchange of benefits and rewards.
Alienative Involvement	A negative orientation that is found in exploitative relationships
Kanter (1968)	
Continuance Commitment	Dedication to organization's survival brought on by previous personal investments and sacrifices such that leaving would be costly or impossible
Cohesion Commitment	Attachment to social relationships in an organization brought on by such techniques as public renunciation of previous social ties or engaging in ceremonies that enhance group cohesion
Control Commitment	Attachment to organizational norms that shape behavior in desired directions resulting from requiring members to disavow previous norms publicly and reformulate their self-conceptions in terms of organizational values
Angel and Perry (1981)	
Value Commitment	Commitment to support the goals of the organization
Commitment to Stay	Commitment to retain their organizational membership
O'Reilly and Chatman (1986)	
Compliance	Instrumental involvement for specific extrinsic rewards
Identification	Attachment based on a desire for affiliation with the organization
Internalization	Involvement predicated on congruence between individual and organizational values

Table 2 (continued)

Penley and Gould (1988)	
Moral	Acceptance of and identification with organizational goals
Calculative	Commitment to an organization which is based on the employee's receiving inducements to match corrections
Alienative	Organizational attachment which results when an employee no longer perceives that there are rewards commensurate with investments; yet he or she remains due to environmental pressures
Meyer & Allen (1991)	**Dimensions**
Affective	The employee's emotional attachment to, identification with, and involvement in the organization
Continuance	An awareness of the costs associated with leaving the organization
Normative	A feeling of obligation to continue employment
Mayer & Schoorman (1992)	
Value	A belief in an acceptance of organizational goals and values and a willingness to exert considerable effort on behalf of the organization
Continuance	The desire to remain a member of the organization
Jaros et al. (1993)	
Affective	The degree to which an individual is psychologically attached to an employing organization through feelings such as loyalty, affection, warmth, belongingness, fondness, pleasure, and so on
Continuance	The degree to which an individual experiences a sense of being locked in place because of the high cost of leaving
Moral	the degree to which an individual is psychologically attached to an employing organization through internalization of its goals, values and, missions

Meyer and Allen's Three-Component Model of Organizational Commitment

Although there have been a variety conceptualizations concerning the nature of organizational commitment in the literature, perhaps the most influential of current models that are dominant in organizational commitment research is that of Meyer and Allen (McDonald & Makin, 2000). Based on the work of Porter et al. (1974) and a wide range of other organizational commitment scholars, Allen and Meyer (1990) developed a measure of organizational commitment with three major components and corresponding scales. The 3-component model of organizational commitment advanced by Meyer and his associates (Allen & Meyer, 1990; Meyer & Allen, 1991; Meyer & Allen, 1997; Meyer, Allen &, Smith, 1993; Meyer, Bobocel, & Allen, 1991; Lee, Allen, Meyer &, Rhee, 2001) has gained popularity because the model integrates all views and definitions of organizational commitment, a feature that offers a big advantage over other models that have been discussed. Furthermore, although 3-component scales have been developed and used previously by other researchers (e.g., Jaros et al., 1993; O'Reilly & Chatman, 1986), Meyer and Allen`s (1991) commitment components are the only scales to have been published as theoretical models that contain the antecedents and consequences of a 3-component model of organizational commitment (Clugston, 2000).

Meyer and Allen (1991) divided organizational commitment into affective, continuance, and normative components that are described as "want to," "have to," and "ought to." In detail, affective commitment refers to an employee's emotional attachment to, identification with, and involvement in the organization. Employees with a strong affective commitment continue employment with the organization because they

want to do so. Continuance commitment refers to an awareness of the costs associated with leaving the organization. Employees whose primary link to the organization is based on continuance commitment remain with the organization because they have to do so. Finally, normative commitment reflects a feeling of obligation to continue employment. Employees with a high level of normative commitment feel that they ought to remain with the organization (Allen & Meyer, 1997). Meyer and Allen (1991) asserted that when all three forms of commitment are considered together, one can provide a more complete understanding of an employee's relationship to an organization. Although employees can experience varying degrees of all three forms of commitment according to the model, each component has different behavioral outcomes.

Meyer and Allen (1991) found it more appropriate to consider affective, continuance, and normative commitment to be components rather than types of commitment since an employee's relationship with an organization may reflect varying degrees of all three. For example, employees may have a strong affective commitment to their organization but, nevertheless, they may not to stay which would imply a low level of continuance commitment. On the other hand, another group of employees may have a strong continuance and normative commitment but a weak level of affective commitment. Finally, a third group of employees may show a strong continuance commitment to their organizations but weak affective or normative commitment. As a consequence, researchers should consider all three components together rather than attempting to classify them under a particular type of commitment (Allen & Meyer, 1997).

Affective Commitment

The most widely discussed form of psychological attachment to an organization is affective commitment. Although Meyer and Allen's (1991) 3-component model includes affective, continuance, and normative commitment, affective commitment is considered to be the more effective measurement of organizational commitment. Affective commitment takes its root from the work of Kanter (1968) who described cohesion commitment as the attachment of an individual's fund of affectivity to the group. Although the core of this component is an affective tendency, it has been described in a broad way (Gonzalez & Guillen, 2008). For example, Buchanan (1974) and Porter et al. (1974) concentrated on a sense of belonging and the experience of loyalty. More recently, Mowday et al. (1982) viewed affective commitment as the relative strength of an employee's identification with and involvement in a particular organization. Finally, as conceptualized by Meyer and Allen (1997), affective commitment in my study refers to the employee's emotional attachment to, identification with, and involvement in the organization and its goals. As a consequence, affective commitment becomes almost natural for an employee to become emotionally attached to and enjoy continuing membership in an organization (Meyer & Allen, 1984).

Affective commitment results in an employee "wanting" to remain in an organizational relationship. As mentioned, this can be considered the most beneficial form of psychological attachment because it is associated with productive behavior aimed at making meaningful contributions to the organization. Meyer and Allen (1997) supported their statement by explaining that individuals who have strong affective

commitment are motivated to higher levels of performance and make more meaningful contributions than individuals who show continuance or normative commitment. Cohen (1996) also revealed that affective commitment was more highly correlated with all other types of commitment including continuance commitment, normative commitment, career commitment, and job involvement, for example. In other words, employees who stay in an organization because they want to are more likely to express higher levels of commitment to their work and jobs. According to Mowday et al. (1979), the degree of affective commitment is based on the strength of positive feelings toward the organization as well as the willingness to increase an employee's emotional bond to that organization. Often, affective commitment is the result of events, actions, and policies by which the organization creates positive emotional connections with employees. In sum, individuals who display a strong affective commitment continue to work in the organization because they want to (Meyer & Allen, 1997) and they are intrinsically willing to make an effort for their organization (Liou, 2008).

Continuance Commitment

The second component of Meyer and Allen's (1991) model is continuance or calculative commitment which suggests that employees desire to keep their relationship with an organization not due to an emotional attachment but rather to the costs involved if they decide to leave (Ketchand & Strawser, 2001). According to Lambert, Hogan, and Jiang (2008), continuance commitment is derived from the theoretical work of Etzioni (1961) and Becker (1960). Etzioni argued that calculative involvement depends on an exchange relationship in which employees consider their contributions to the organization

to be beneficial or equitable. This view was expanded by Becker's (1960) side bet theory (Randall & O'Driscoll, 1997) whereby employees make side bets when they take an action that will increase the costs associated with discontinuing another related action. Essentially, the employees are betting that the time and energy they have invested in the organization will eventually pay off. Winning the bet, however, requires continued employment in the organization (Meyer & Allen, 1990). As employees remain in an organization for an extended length of time, they will accumulate greater benefits that will discourages them from searching for alternative employment (Ketchand & Strawser, 2001). Becker (1960) argued that the likelihood of employees remaining with the organization is positively related to the magnitude and number of side bets they recognize.

Allen and Meyer (1990) advanced the concept of continuance commitment, a component of their attitudinal model of organizational commitment. They viewed continuance commitment as the need for an employee to remain in an organization due to the costs associated with leaving. This type of commitment refers to the employee's calculative or instrumental assessment of perceived utility by remaining versus leaving the organization. As Wallace (1997) argued, since this component is often seen to be reflected by an employee's intent to stay a member the organization as a result of his or her investments, the continuance component is not always clearly distinguishable from an employee's stated intentions to stay. As a result, continuance commitment has been operationalized as the intent to stay when the employee is committed to a particular line

of action (e.g., intent to remain a member of an organization). This is the approach taken in my study.

In recent years, researchers have pointed out that there are two dimensions of commitment that include continuance commitment with a low number of alternatives and continuance commitment with high personal sacrifices (Hackett, Bycio, & Hausdorf, 1994). The concept of high sacrifice parallels Becker's (1960) concept of side bets or the personal cost of abandoning an organization and losing an investment. On the other hand, low alternatives exist when there are few existing employment alternatives feasible for the employee (McGee & Ford, 1987; Hackett et al., 1994). In their 3-component model, Meyer and Allen (1991) labeled these two dimensions as investments and alternatives; however, they regarded them as antecedents of continuance commitment. They further argued that a side bet involves the investment of valuable assets such as time, effort, or financial gain that an employee would lose if he or she left the organization. For example, leaving the organization would mean that the employee stood to lose or have wasted any time, money, or effort that was invested in the organization. Meyer and Allen's (1991) second hypothesized continuance commitment represents the employee's perceptions of employment. According to Meyer and Allen (1990), "the fewer viable alternatives employees believe are available, the stronger will be their continuance commitment to their current employer" (p. 4). In other words, the perceived availability of alternatives will be negatively correlated with continuance commitment. Based on Meyer and Allen's (1991) 3-component model, continuance commitment was not separated into two separate dimensions in my study since the model focused on the antecedents of overall

continuance commitment rather than looking for the differences between these two separate dimensions.

The difference between affective commitment and continuance commitment is that employees who are high in affective commitment stay with the organization because they want to. On the other hand, employees who are high in continuance commitment stay with the organization because they have to (Meyer & Allen, 1991). Another critical difference between the two components is that affective commitment is formed largely as an emotional response on the basis of rewards, whereas continuance commitment is an emotionally neutral response that is impacted by the existence of penalties associated with the intention or decision to discontinue membership with the organization (Stebbins, 1970). In addition, when continuance commitment is compared to affective commitment, it can be noted that affective commitment is a more positive form of commitment that represents the desire for a relationship to continue and reflects a feeling of emotional attachment to an organization (Meyer & Allen, 1991).

The literature indicates that continuance commitment is a well developed component of organizational commitment with a well founded and strong chain of causality (Meyer & Allen, 1997). According to some scholars, however, whether continuance commitment is really a commitment is questionable (Gonzalez & Guillen, 2008). For example, Ko, Price, and Mueller (1997) argued that even if continuance commitment explains why people remain in an organization, it is not a real commitment. In addition, McGee and Ford (1987) reported that the two dimensions of continuance commitment, high sacrifice and low alternatives, are significantly and differentially

related to affective commitment. More specifically, high sacrifice indicates a positive relationship and low alternatives show a negative relationship to affective commitment.

Normative Commitment

Although scholars, namely Porter et al. (1974) and Penley and Gould (1988) included loyalty in the affective dimension, Meyer et al. (1991, 1993) made a distinction between the desire to be loyal and the obligation to be loyal (Gonzalez & Guillen, 2008). As a result, a third component of commitment was identified as the obligation dimension and labeled normative commitment, also referred to as moral commitment in the literature (Jaros et al., 1993). Meyer and Allen's (1997) discussion of normative commitment begins with an outline of earlier (Meyer & Allen, 1991; Wiener, 1982) and more recent (Rousseau, 1995) theorizing of relevance to the development of normative commitment.

As conceptualized by Meyer and Allen (1991), normative commitment in my study refers to an employee's feelings of obligation to remain with the organization. Thus, employees with strong normative commitment will remain with an organization (Meyer & Allen, 1991; Scholl, 1981; Wiener, 1982). Such a feeling of obligation often stems from what Wiener characterized as generalized value of loyalty and duty. The development of normative commitment is based on a collection of pressures that individuals feel during their early socialization and during their socialization as newcomers to the organization. In other words, this is a predisposition to be loyal and committed to institutions such as family, marriage, country, and religion, for example, and to the employment organization as a result of socialization in a culture that often

places emphasis on loyalty and devotion to institutions. Wiener's view of commitment defends the idea that an individual exhibits commitment behavior because he or she believes it is the moral and right thing to do. Wiener maintained that earlier or later socialization experiences are extremely rich and varied and carry with them a variety of messages regarding the appropriateness of particular attitudes and behaviors. Here, the presumed process is one of internalization in which internalized normative pressures make organizational commitment a moral obligation. Thus, committed individuals may exhibit certain behaviors not because they believe that doing so is to their own personal benefit, but rather because they believe that it is the right and moral thing to do. This feeling of moral obligation is measured by the extent to which employees feel that they should be loyal to their organization and make personal sacrifices to help the organization out and not criticize it (Wiener & Vardi, 1980).

Normative commitment is also developed on the basis of a particular kind of investment that the organization makes to the employee, specifically, investments that seem difficult for employees to reciprocate. These may include organization-sponsored tuition payments made on behalf of employees or a nepotism hiring policy that favors the employee's family members (Meyer & Allen, 1997). The most specific theoretical formulation of the reciprocity norm was demonstrated by Gouldner (1960) who believed that reciprocity is a generalized universal norm. Gouldner held the idea that the norm promotes the idea that people should help those who have helped them and by the same token should not harm those who have helped them. Investment and reciprocity work in opposite fashions. In other words, an employee receives a benefit (e.g., training,

opportunity beyond his or her ability) and repays it in the future in terms of reciprocity. However, investments accumulate and will be rewarded at a future time as employees make contributions (Scholl, 1981). Given norms of reciprocity (Gouldner, 1960), it would be expected that employees would feel a sense of obligation or normative commitment to their organization (Meyer & Allen, 1997). Further, employees would not be expected to leave if in doing so they would cause any harm to the employer who has helped them (Scholl, 1981).

Although researchers have found affective commitment to be the best determinant for employee attitudes (Wong et al., 2002), the role of normative commitment gained more attention as cross-cultural studies became more popular (Meyer & Allen, 1997). For example, in Turkey−a collectivistic society−normative commitment is considered to be a significant variable in terms of employee attitudes (Wasti, 2003). Studies conducted by Chen and Francesco (2003) and Cheng and Stockdale (2003) found that China, another collectivistic society, also supported the utility of normative commitment. Thus, the moral nature of employee and employer attachment in collectivist cultures may be due to the personal component of one's relationship to the organization (Wasti, 2003).

As a consequence of the differences in motives, the affective, continuance and normative components of organizational commitment should have distinctive antecedents (Meyer et al., 1989; Somers, 1995). Therefore, a greater understanding of the components of commitment with respect to their antecedents is required.

Antecedents of Organizational Commitment

Antecedents are factors or characteristics that influence the development of affective, continuance, and normative commitment (Hall, Smith, & Langfield-Smith, 2005). According to Billingsley and Cross (1992), although the outcomes of commitment appear to be fairly clear, less is known about the antecedents of commitment. Researchers have suggested that the major antecedents for organizational commitment can be assembled into a variety of distinct groupings (Darden, Hampton, & Howell, 1989; Ferris, 1981; Glisson & Durick, 1988; Iverson & Buttigieg, 1999; Steers, 1977). Steers classified commitment antecedents into personal characteristics, job or role related characteristics, and work experiences while Ferris labeled them as personal characteristics or work related characteristics. Further, Glisson and Durick classified the antecedents into personal characteristics, job (or task) characteristics, and organizational characteristics. Darden et al. grouped them into three categories consisting of (a) personal attributes, (b) work relations, and (c) job characteristics. Finally, Iverson and Buttigieg also proposed that antecedent variables could be broken into three categories: (a) personal variables, (b) job related variables, and (c) environmental variables. Although the first two antecedents proposed by Iverson and Buttigieg are very similar to other researchers, they introduced environmental variables as a new label by explaining that these variables are related to the nonworking setting that include industrial relations and job opportunities. Even though researchers have labeled the commitment antecedents differently, each of these conceptualizations contains two basic elements. First, personal characteristics or attributes include demographic variables (Turner, 2008) or

characteristics that employees bring to or experience in the organization (Iverson & Buttigieg, 1999). The second element comprises the experiences and/or characteristics of an individual's job or work (e.g., job characteristics, role related characteristics) (Turner, 2008).

As a result, my study utilized two groupings: (a) personal characteristics and (b) job and role related characteristics. According to Turner (2008), understanding the distinction between personal characteristics and job characteristics is important when examining commitment antecedents. Turner argued that personal characteristics cannot be changed because they are what the employee brings to his or her organization. On the other hand, organizations can affect how the employee perceives certain characteristics of his or her job.

Personal Characteristics

A wide range of personal characteristics have been investigated in relation to organizational commitment (Allen & Meyer, 1997; Chughtai & Zafar, 2006; Griffin & Bateman, 1986; Mathieu & Zajac, 1990; Muthuveloo & Rose, 2005; Park & Rainey, 2007; Steers, 1977; Turner, 2008; Vanderberg & Lance, 1992). In international literature, the most frequently examined personal characteristics have included age, tenure, education, gender, number of children and marital status, and positions (Randall, 1993).

Age, Tenure, and Organizational Commitment

In general, commitment has been found to be positively related to age and tenure (Allen & Meyer, 1993; Angle & Perry, 1981; Mathieu & Zajac, 1990). Researchers have argued that as individuals grow and accumulate experience, their opportunities for

alternative employment tend to decrease. This decrease in an individual's degree of freedom may increase the perceived attractiveness of the present employer and thus enhance employees' commitment to their organization (Meyer & Allen, 1984; Mowday et al., 1982). In other words, the consistent relationship found among age, tenure, and organizational commitment may be considered as an outcome of accrued investments over time as well as option cutting (Parasuraman & Nachman, 1987).

In addition to age, tenure, and the unidimensional construct of organizational commitment, there has been more research conducted to examine the effect of age and tenure on the three components of organizational commitment. Based on the commitment literature, there is reason to expect that age and tenure relate differentially to affective, continuance, and normative commitment. For example, Hackett (1994) assumed that a significant positive relationship should be observed for continuance commitment and affective commitment as they relate to age and tenure, but there is little theoretical basis to conclude that there is a consistent relationship between age, tenure, and normative commitment.

However, in Mathieu and Zajac's (1990) meta-analytic reviews that involved 10,335 subjects, a statistically significant relationship was reported between only age and affective commitment. Although numerous researchers have suggested that age should be more highly related to continuance commitment, the results of Mathieu and Zajac's meta-analytic research indicated that age was significantly more related to affective commitment than to continuance or normative commitment. Similarly, Wahn (1998) conducted a study based on Allen and Meyer's (1991) continuance commitment scale

that consisted of 192 male and 347 female human resource professionals. The findings revealed that age was not significantly related to continuance commitment. In addition, Wahn's regression analysis confirmed a positive relationship between tenure and continuance commitment.

In two studies conducted by Meyer and Allen (1984), they examined the influence of age and tenure on organizational commitment. In their first study, subjects read scenarios in which an employee was described as being high or low in continuance commitment and high or low in affective commitment and then responded to several commitment instruments as to how they felt an employee would respond. In the second study, 130 employees from several administrative departments of a large university completed the same commitment instruments. Based on the findings of both studies, Meyer and Allen reported that age and tenure were correlated positively with affective commitment but did not correlate significantly with continuance commitment.

Mahieu and Zajac (1990) distinguished the differences between tenure with an organization and tenure in a particular position. They argued that the two concepts would be related to the extent that employees had not changed jobs within an organization. However, organizational tenure was likely to be a better substitute measure of side bets. Within this argument, their full meta-analysis demonstrated organizational tenure to be more related to commitment than was position tenure. Furthermore, their analysis revealed tenure position to be significantly more positively related to affective commitment, whereas organizational tenure tended to be more positively related to continuance commitment. Mahieu and Zajac concluded that the number of years spent in

a particular position may develop an employee's affective attachment to an organization. On the other hand, years spent in an organization build an employee's continuance commitment based on their greater side bets (e.g., pension plan).

Currie and Dollery (2006) conducted a study to investigate the levels of commitment among Australian sworn police officers and student police officers in order to find suggestions as to how organizational commitment could be enhanced. In terms of organizational tenure, their findings were consistent with the meta-analytic reviews of Mathieu and Zajac (1990). Currie and Dollery reported that continuance commitment was positively related to tenure or years of service. Based on this finding, they argued that as employees advance with respect to tenure they acknowledge their contributions in terms of time, effort, money, and the increased cost of terminating their employment. In research pertaining to the policing area, Gasic and Pagon (2004) found evidence that age was statistically significant and positively associated to organizational commitment. They reported that older police officers were generally more committed to their organization when compared to their younger counterparts. In addition, both organizational tenure and position tenure were positively related to the level of organizational commitment.

In their more recent research, Meyer, Allen, and Smith (1993) revised the 3-component model scale and used it to test hypotheses concerning differential relations with antecedent variables. The results indicated that all three components of commitment to the organization were correlated significantly and positively with age and tenure. In recent research conducted in Turkey, Sigri (2007) used Meyer and Allen's (1993) 3-component typology to determine if there was possible differentiation between public and

private sector employees' organizational commitment levels. Consistent with Meyer and Ellen (1993), findings revealed that affective and normative commitment were closely related to tenure. In other research conducted in Nigde, a province of Turkey, Durna and Eren (2005) suggested that affective commitment and normative commitment are related to both tenure and age.

In terms of organizational commitment antecedents, Beck and Wilson (2000) focused on a very important detail regarding tenure versus age and found a strong relationship between age and tenure in their initial data analysis. In order to determine the exact contribution taken from each variable, they calculated a partial correlation between age and organizational commitment, controlling for organizational age (tenure). They then calculated the partial correlation between age and organizational commitment, controlling for chronological age and found a nonsignificant relationship between age and organizational commitment when the impact of tenure was controlled. However, when they controlled the impact of age, the relationship between tenure and organizational commitment remained significant suggesting that the correlation between age and organizational commitment was due to the extent of covariation between age and tenure rather than to age itself. Beck and Wilson's findings supported Cohen's (1993) argument that tenure is the most appropriate development index in work-related attitudinal studies. Based on these assumptions, age was controlled in my study in order to examine the effects of tenure on organizational commitment as well to determine the relationship between organizational tenure to affective, continuance and normative commitment.

H_1. Tenure is positively related to each component of organizational commitment (affective, continuance, and normative commitment).

Education and Organizational Commitment

Another personal characteristic that has received much attention in organizational commitment is the employee's level of education. In contrast to age and tenure, researchers have often found education to be inversely related to commitment (Angle & Perry, 1981; Joiner & Bakalis, 2006; Mathieu & Zajac, 1990; Morris & Sherman, 1981; Morris & Steers, 1980; Mowday et al., 1982; Steers, 1977). Arguably, this inverse relationship may stem from the fact that more highly educated employees have higher expectations that the organization may be unable to meet. In addition, highly educated persons may be more committed to a profession or trade; therefore, it can be extremely difficult for an organization to compete for psychological involvement from these employees (Mowday et al., 1982). Ritzer and Trice (1969) provided a different explanation from Mowday et al. by stating that since employees who have a low level of education have fewer opportunities outside their organization, they tend to stay with their current organizations, and eventually their levels of organizational commitment increase.

Like Mowday et al. (1982), Allen and Meyer (1990) and Hackett et al. (1994) argued that since education is a measure of general rather than specific human capital, more educated individuals typically have greater job options and are not locked into an organization, thus weakening their moral attachment while raising job expectations that are unlikely to be met. Based on these statements, education in my study is hypothesized to be negatively related to affective, normative, and continuance commitment.

By involving affective, continuance, and normative commitment to determine how various commitments are differentially related to a set of antecedents with the education variable measured in years, Iverson and Buttigieg (1999) examined the multidimensionality of organizational commitment. Based on a sample of 505 Australian male firefighters, the results revealed that employees who had higher educational experiences decreased affective, continuance, and normative commitment and only normative commitment was statistically significant. In other words, there was a negative and significant relationship between firefighters' educational level and normative commitment to their organization. The results of meta-analyses conducted by Mathieu and Zajac (1990) also exhibited a weak negative correlation between education and affective, continuance, and normative commitment. Although the level of the relationship was small, it was statistically stronger (more negative) for affective commitment when compared to continuance commitment.

In another research, Bashaw and Grant (1994) explored personal characteristics as antecedents to three types of work commitment: (a) job commitment, (b) organizational commitment, and (c) work commitment. They demonstrated that the distinct nature of the three work commitments reduced the redundancy concept found among them and other forms of work commitment. In general, the results indicated that each form of commitment was uniquely related to a set of personal characteristics. Moreover, educational level was found to be the most important personal variable and the only one to be significant regarding organizational commitment. Bashaw and Grant

concluded that less educated employees tend to exhibit higher levels of organizational commitment than those who have attained greater levels of education.

Using March and Simon's (1958) theory related to the nature of organizational commitment as a basis for their field study, Mayer and Schoorman (1998) analyzed the antecedents of affective and continuance commitment and found the differential antecedents of these two dimensions to be consistent with March and Simon's theory. Mayer and Schoorman reported that although education was negatively related to affective and continuance commitment, it was more highly correlated with continuance commitment when compared to affective commitment. Researchers have explained the reason for this finding by stating that employers use education as a screening tool to select those workers who are more likely to be productive; therefore, more educated employees would be more likely to find alternative employment. In other words, having a higher education increases one's perceived ease of movement thus reducing continuance commitment. Mayer and Schoorman's research is consistent with Allen and Meyer (1990) who found that education was more negatively related to continuance commitment. In addition, Wahn (1998) revealed a negative relationship between educational level and continuance commitment in her research based on Allen and Meyer's (1990) continuance commitment scale.

Although there have been numerous researchers who have reported on antecedents and organizational commitment as discussed above, few studies have been carried out in a non-Western context. To void this gap, Ahmad and Bakar (2003) conducted a study in Malaysia in order to investigate the relationship between training

variables and various aspects of organizational commitment (e.g., affective, normative, continuance, and overall organizational commitment). According to their findings, the level of education of employees was the second most important reason for wanting to either stay or leave their organizations followed by the training environment variable. Although the overall organizational commitment did not indicate a negative relationship with the level of education, there was a negative relationship between the level of education and continuance commitment. However, a more recent study (Chughtai & Zafar, 2006) conducted in another non-Western country, Pakistan, did not support these findings. Chughtai and Zafar reported that the level of education was not significantly related to commitment. Similarly, neither Hogan et al. (2006) nor Henkin and Holliman (2009) found education and one's commitment level to be significantly correlated. Also, Robertson, Lo, and Tang (2007) did not find a correlation between education and commitment level among municipal employees in three Chinese cities. Finally, Ors, Acuner, Sarp, and Onder (2003) conducted a study in Turkey in order to evaluate organizational commitment of nurses and doctors and whether their level of commitment changed in accordance with various personal characteristics. Like their Chinese and Pakistani colleagues, Ors et al. did not report a significant relationship between the level of education and organizational commitment.

There is no known study that has been conducted to examine the antecedents of the 3-component model of organizational commitment (affective, normative, continuance) in a Turkish National Police setting. However, from a few colleagues who have included overall organizational commitment as a variable in their research, Atak

(2009) found evidence that education among members of the Turkish National Police was related to organizational commitment. For example, Atak reported that a higher education level, specifically a doctorate degree, increased organizational commitment. First, however, it should be noted that Atak's study focused only on high ranking officers who graduated from the police academy that provides four years of education and training at the college level (Caglar, 2004). Moreover, a significant portion of those ranking officers continued their education to receive a master's or doctorate degree after the college level education provided by the academy. On the other hand, Caglar acknowledged that regular Turkish police officers come chiefly from high schools located across Turkey, and they receive only basic training in police schools. However, my research includes regular police officers and ranking officers in the TNP who are represented as having all levels of education. Second, Atak's research did not consider the level of education as an individual variable but rather combined educational degree, years in current position, and mentoring relations to predict organizational commitment. Thus, the positive relationship obtained in Atak's study regarding the effect of years in current position and mentoring relations may not yield the same positive results when level of education is considered as an individual independent variable.

Contrary to Atak's (2008) research, I do not anticipate a positive relationship between level of education and organizational commitment. Based on Allen and Meyer's (1990) statement, however, I do assume that officers who have low education levels may be unlikely to have skills that are transferable to another organizational setting. On the other hand, higher education may tend to increase mobility given that a higher

educational level (doctorate degree) or advanced technical certification adds value to an employee as a human resource. In light of prior research (Allen & Meyer, 1990; Meyer & Allen, 1991; Meyer & Allen, 1997), the following hypothesis was developed:

H_2. Education is negatively related to each component of organizational commitment (affective, continuance, and normative commitment).

Gender and Organizational Commitment

Gender is another personal characteristic that has been researched in relation to organizational commitment that has yielded inconsistent results (Joiner & Bakalis, 2006). Through a review of related literature, two approaches offer explanations for understanding the inconsistent results concerning gender and organizational commitment. In the first model labeled as the gender model, women are assumed to have different levels of commitment because they place a greater emphasis on family roles than do men. According to Aven et al. (1993), women tend to focus more on family roles as a result of their socialization which produce different orientations that affect their roles and importance of their work. On the other hand, the socialization process in men often leads them to identify themselves as being independent, assertive, and goal-directed according to Marsden, Kalleberg, and Cook (1993). In other words, they tend to see their roles in the organization as central to their self perception. Thus, the gender model assumes that women are predisposed to show less affective commitment to their organizations than men (Dodd-McCue & Wright, 1996). In contrast to the gender model, affective commitment is a function of the work environment in the job model (Aven et al., 1993). Accordingly, affective commitment between women and men in the job model varies

only when they have different organizational experiences. In other words, there are no differences in the work attitudes of women and men that are established in similar ways by both genders (Loscocco, 1990).

In their meta-analytic study, Mathieu and Zajac (1990) suggested that women tended to be more committed than men; however, the magnitude of this effect was small. Similar to Mathieu and Zajac, in research conducted by Angle and Perry (1981) and Hrebiniak and Alluto (1972) women were found to be more committed than men. On the other hand, other researchers have reported that men were more committed than women (DeCottis & Summers, 1987; Reyes, 1989). According to Mowday et al. (1982), women may be more committed to an organization because they have had to overcome more barriers to attain their positions. Aven et al. (1993) offered another explanation by claiming that women not only have to overcome more obstacles than men in order to become an organizational member, but they are also faced with fewer job opportunities. Additionally, Bashaw and Grant (1994) administered self-report questionnaires to a sample of industrial sales persons from 16 companies located in the United States and found evidence that gender makes a difference in organizational commitment. Results indicated that women have a higher level of organizational commitment than their male counterparts.

Gasic and Pagon (2004) conducted a study in the largest regional police unit in Slovenia to ascertain the influence of personal characteristics on organizational commitment. Data were obtained from a sample of 389 sworn and uniformed police officers from the Police Directorate Ljubljana consisting of 16 stations and a criminal

investigative unit. None of the participating police officers held supervisory ranks. Results indicated that gender was not significantly related to organizational commitment, a finding that contradicted Mathieu and Zajac (1990) who reported that women were generally more committed to their organization than were men.

Similarly, Bruning and Synder (1983) analyzed gender and position as antecedents of organizational commitment that included 583 employees from social service organizations. The results of their simple correlation and multiple hierarchical regression analyses revealed that gender was not a predictor of organizational commitment. Bruning and Synder presumed that their study results generalized best to public sector organizations, particularly those in which women are traditionally employed. They concluded by stating that gender differences may not exist in every organization, and employers should not assume that such differences occur. Bruning and Synder suggested that future researchers should investigate the extent to which the historical role of women in certain types of organizations affects the likelihood that gender differences will exist.

In more recent studies conducted by Aven et al. (1993), Joiner and Bakalis (2006), and Lambert et al. (2008), gender was not associated with either affective or continuance commitment. Correspondingly, Turkish researchers who included private and public sector employees in their studies did not find any significant correlation between gender and affective, continuance, and normative commitment (Boylu, Pelit, & Gucer, 2007; Durna & Eren, 2005; Ors et al., 2003; Sigri, 2007).

Harrison and Russell (1998) examined the commitment levels of Mexican employees in a U.S. firm located in Mexico as well as potential antecedents to their commitment. To determine the nature and strength of the relationship between antecedents and commitment, Harrison and Russell conducted regression and correlation analysis. In terms of gender, they predicted that women would be less committed than their male counterparts. As predicted, Mexican women were found to be less committed to the organization than males thus suggesting that their traditional roles outside the workplace take precedence over their roles as organizational members.

Dodd-McCue and Wright's (1996) research conducted in the United States supported Harrison and Russell's (1998) findings. In their study, Dodd-McCue and Wright developed a questionnaire to examine organizational commitment among sample groups consisting of 656 persons from the Virginia Society of Certified Public Accountants and from the Central Virginia Chapter of the Institute of Internal Auditors. They reported significant gender differences in levels of affective commitment indicating that women were less committed to their organizations than were men. According to the authors, their study combined and supported many findings of prior research in the examination of affective commitment.

In contrast to studies in which women were found to show less affective commitment to their organizations than men, Wahn (1998) reported that women exhibited a higher commitment. In fact, when the relationship between gender and continuance commitment were examined, Wahn used the continuance commitment scales developed by Meyer and Allen (1984). By comparing the men and women groups

resulted in women reporting significantly higher continuance commitment than their male counterparts. Citing from Grusky (1966) and Mowday et al. (1982) who contended that females face greater barriers than males when seeking employment, Wahn used their results as a possible explanation to the high continuance commitment of females. She maintained that having overcome the barriers, women would be more committed to continue the employment relationship. As Meyer and Allen (1991, 1997) described, continuance commitment refers to an employee being tied to an organization because he or she needs to remain. Wahn's research findings suggest that women may feel tied more to an organization than males due to their feeling such a need to stay.

H_3. There is a significant difference between females and males in regard to affective, continuance, and normative commitment.

Marital Status, Number of Children, and Organizational Commitment

Marital status has been found to be a consistent predictor of organizational commitment (Chughtai & Zafar, 2006). Although married individuals have been reported as being more likely to be committed to their organizations than unmarried employees (Hrebeniak & Alutto, 1972; Mathieu & Zajac, 1990; Meyer & Allen, 1988; Tsui, Leung, Cheung, Mok, & Ho, 1994), other researchers have not found empirical evidence to suggest this relationship (Bashaw & Grant, 1994; Durna & Eren, 2005; Mottaz, 1987). Because married employees typically have more family responsibilities and economic burdens, they need more job stability and security when compared to their unmarried counterparts (Angle & Perry, 1983). Based on Angle and Perry's argument, this appears to suggest that marital status may be more related to continuance commitment. As

previously described, continuance commitment refers to an awareness of the costs associated with leaving the organization (Meyer & Allen, 1997).

From a different point of view, Joiner and Bakalis (2006) stated that marital status and/or family responsibilities are often referred to as kinship responsibilities in the literature. Kinship is defined as the degree of an individual's obligation to immediate relatives in the community (Iverson & Buttigieg, 1992), or in other words, kinship responsibilities refer to the number of employee dependents. The main focus of kinship is placed on an employee's economic obligations to take care of children or other dependent variables (Beeman, Kim, & Bullerdick, 2000). Because employees with greater kinship responsibilities are more dependent upon their organization to fulfill their financial needs, this should lead to greater affective, normative (due to the need to reciprocate to the organization) and continuance commitment (Iverson & Buttigieg, 1999). In light of this theory, Iverson and Buttigieg proposed that employees who are married and who have more family responsibilities (e.g., more children) would be more likely to have higher levels of affective and continuance commitment.

This notion found evidence in the empirical research. For example, Kacmar, Carlson, and Brymer (1999) examined antecedents of organizational commitment including marital status in relation to the Organizational Commitment Questionnaire. According to their results, marital status was positively related to affective commitment and continuance commitment which is consistent with previous research suggesting that married employees indicate greater commitment due to financial burdens and family responsibilities (Angle & Perry, 1983; Mathieu & Zajac, 1990). Gasic and Pagon's

(2004) research findings in the Slovenian Police Department also showed that marital status was positively associated with the level of organizational commitment. Similarly, Meyer and Allen (1988) reported a positive marital status impact on commitment after 11 months of employment.

In Iverson and Buttigieg's (1999) study, being married and having more children were found to have differential impacts on normative commitment. Based on work/family conflict literature, Iverson and Buttigieg argued that the relationship with normative commitment reflects the work/family conflict experienced by employees. For example, employees who have increased family obligations show lower moral obligations to stay in the organization. In other words, employees may resolve their conflict by selecting to satisfy family needs over organizational needs. However, employees are also more likely to stay with an organization when they perceive lower alternative job opportunities because the cost of leaving binds the employee to an organization. When this happens to be the case, employees rely on the organization as a means of fulfilling important kinship obligations.

H_4. Marital status is positively related to affective and continuance commitment but negatively related to normative commitment.

H_5. Number of children is positively related to affective and continuance commitment but negatively related to normative commitment.

Job Characteristics

The past three decades have witnessed a substantial increase in research interest related to the area of job scope (Meyer & Allen, 1997) that was used by Hackman and

Oldham (1975, 1976, 1980) to describe a number of job characteristics that have been linked to work outcomes. Among the theories that have received much attention was proposed by Hackman and Oldham (1975) and labeled as the Job Characteristics Model (JCM) (Bhuian, Al-Shammari, & Jefri, 1996). Although other researchers developed alternative theoretical models (e.g., Salancik & Pfeffer, 1978), Hackman and Oldham's basic theoretical framework has not been refuted according to Griffin (1991).

The Job Characteristics Model (JCM)

Hackman and Oldham's JCM was built on the theories developed by Turner and Lawrence (1965) and Hackman and Lawler (1971). Turner and Lawrence reviewed the previous literature and developed six "requisite task attributes" that they hypothesized to be related to work outcomes: (a) variety, (b) autonomy, (c) required interaction, (d) optional interaction, (e) knowledge and skill required, and (f) responsibility. However, their proposition was not considered as a unifying theory since their classification design was used as a framework in which to place a number of relevant characteristics (Aldag, Barr, & Brief, 1981). Turner and Lawrence noted that the resulting scheme in its present form should be considered as an interim stage in the continuing process of clarifying and refining those variables. Subsequently, Hackman and Lawler (1971) identified four of Turner and Lawrence's (1965) requisite task attributes including variety, autonomy, task identity, and feedback that they believed would allow employees to obtain meaningful personal satisfaction from the job itself (Dunham, 1976). Although Hackman and Lawler (1971) accepted Turner and Lawrence's framework as a basis for their argument, they also used the expectancy theory to specify these four core job characteristics (Aldag et

al., 1981). In their own words, Hackman and Lawler (1971) stated that their conceptualization was based on the expectancy theory of motivation as formulated by Lewin (1938) and Tolman (1959) and as applied to work settings by Vroom (1964), Porter and Lawler (1968), and other researchers. Based on the expectancy theory, Hackman and Lawler (1971) suggested that jobs which offered the opportunity for satisfaction of higher order needs should produce positive work outcomes.

Drawing from the earlier work by Turner and Lawrence (1965) and Hackman and Lawler (1971), Hackman and Oldham (1975) developed JCM as presented in Figure 1. As illustrated, the model is comprised of the following major components: (a) five core job dimensions, (b) critical psychological states, (c) personal and work outcomes, and (d) employee growth need strength.

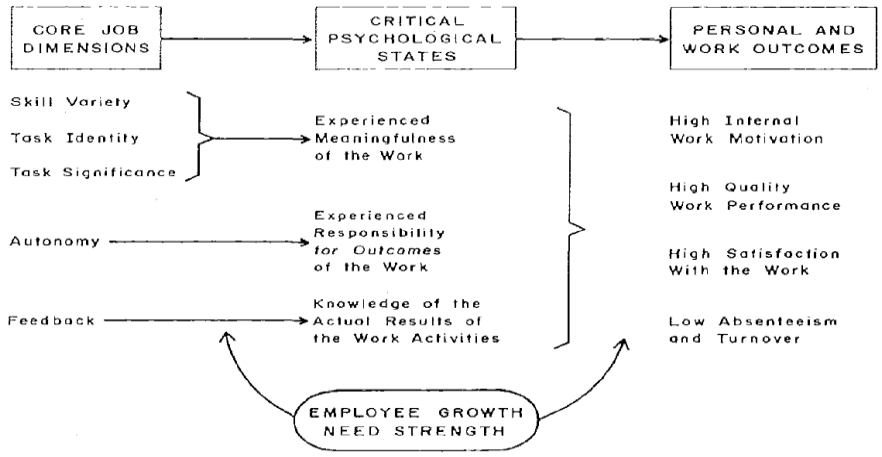

Figure 1. The Job Characteristics Model (Hackman & Oldham, 1975, p. 161).

Five Job Characteristics

First, any job can be described effectively in terms of five core job dimensions or job characteristics that were specifically identified by Hackman and Oldham (1975) as having the following characteristics: (a) *skill variety*, the degree to which a job requires a

variety of different activities in carrying out the work involving the use of a number of different skills and talents of the employee; (b) *task identity*, the degree to which the job requires completion of a whole and identifiable piece of work (i.e., doing a job from beginning to end with a visible outcome); (c) *task significance,* the degree to which the job has substantial impact on the lives or work of other people whether in the immediate organization or in the external environment; (d) *autonomy*, the degree to which the job provides substantial freedom, independence, and discretion to the individual employee in scheduling work and in determining the procedures to be used in carrying out the work activities; and (e) *job feedback,* the degree to which carrying out the work activities required by the job results in the employee obtaining direct and clear information regarding the effectiveness of his or performance environment.

Critical Psychological States

Second, the presence of the five job characteristics produces three critical psychological states: (a) experienced meaningfulness of the work, (b) experienced responsibility for outcome of the work, and (c) knowledge of the actual results of the work activities. The first three job characteristics (skill variety, task identity, and task significance) lead to the psychological state of experienced meaningfulness. Each of these previously identified job characteristics contributes to the overall experienced meaningfulness of the work. For example, a task is considered to be meaningful to the extent that it is experienced as being highly important, valuable, and worthwhile. For example, if a given job is high on all three of the job characteristics, an employee is very likely to experience the work as being meaningful. However, even if one or two of these

job characteristics are low, an employee may experience his or her work as being meaningful since three different task characteristics lead to experienced meaningfulness (Oldham & Hackman, 1980). Autonomy, the fourth characteristic, leads to experienced responsibility wherein experienced responsibility for work outcomes is increased when a job has high autonomy (Hackman & Oldham, 1975). As autonomy increases, employees are likely to feel more personal responsibility for successes and failures that occur on the job and are more willing to accept personal accountability for the outcomes of their work (Hackman & Oldham, 1980). Thus, when individuals are free to decide what to do and how to do it, they feel more responsible for the results, whether good or bad (Greenberg & Baron, 2003).

Finally, feedback contributes to the critical psychological states of knowledge concerning the work results (Hackman & Oldham, 1975) based on how well it provides an understanding of performance effectiveness (Debnath & Tandon, 2007). In other words, when a job is designed to enable an employer to provide employees with information concerning the effects of their actions, employees are better able to develop an understanding of how effectively they have performed, and such knowledge produces their effectiveness (Greenberg & Baron, 2003). In short, employee knowledge of his or her results is increased when a job is high on feedback (Hackman & Oldham, 1975). These critical psychological states are conceptualized as noncompensatory conditions, meaning that all three critical psychological states must be experienced by employees in order for them to achieve the personal and work outcomes proposed in the model (Rungtusanatham & Anderson, 1996). In other words, when all three psychological states

exist, the employee feels good about himself or herself when he or she performs well; in turn, these positive feelings will motivate the employee to continue to perform well (Rungtusanatham & Anderson, 1996).

Personal and Work Outcomes

Third, the three critical psychological states lead to various personal and work outcomes in return. The model assumes that the three conditions related to work outcomes will create a direct rather than an indirect effect that Hackman and Oldham (1975) referred to as high internal work motivation, high quality work performance, high satisfaction with the work, and low absenteeism and turnover. The JCM proposes that all three critical psychological states must be present for positive outcomes to be realized (Hackman & Oldham, 1975) and assumes that the higher the experienced meaningfulness of the work, responsibility for the work performed, and knowledge of the actual results of the work activities, the more positive personal and work outcomes will be (Greenberg & Baron, 2003). According to Hackman and Oldham's (1975) JCM model, certain effects that the five job characteristics have on the personal and work outcomes should be completely mediated by the three critical psychological states (Rungtusanatham & Anderson, 1996).

Growth Need Strength

In addition to the five job characteristics, three critical psychological states, and personal and work outcomes, Hackman and Oldham (1975) added a factor of growth need strength (GNS) as a moderator to the JCM. Growth need strength is described as an individual's desire to be challenged and to grow on the job or one's need for personal

accomplishment, learning, and development on the job (Hackman & Oldham, 1980). The JCM proposes that one of the most important values of an individual worker is the need for personal growth and development through his or her job. Employees who have high levels of GNS respond more positively to a job that has high levels of the five job characteristics than those individuals who have low levels of GNS. In other words, the level of GNS moderates the relationship between the five job characteristics and work outcomes in such a way that employees with higher levels will have a stronger relationship between job characteristics and positive work outcomes. On the other hand, employees with lower levels of GNS will experience a weaker relationship between job characteristics and expected positive outcomes (Hackman & Oldham, 1980). Growth need strength is theorized as (a) moderating the influence of the five job characteristics on the three critical psychological states and (b) moderating the impact of the three critical psychological states on personal and work outcomes (Hackman & Oldham, 1975).

In Hackman and Oldham's (1980) modified version of the Job Characteristics Model, the outcomes of high growth satisfaction and work effectiveness replaced the outcomes of low absenteeism and turnover and high quality work performance. Also, high employee satisfaction with work was labeled as high general job satisfaction.

Motivating Potential Score

Following the Job Characteristics Model that was depicted earlier (cf., Figure 1), a summary score may be possible to generate that reflects the overall motivating job potential in terms of Hackman and Oldman's (1975) five job characteristics. It may be

useful to combine the job characteristics into a single index that reflects the overall potential of a job to encourage a specific positive work outcome on the part of job incumbents (Hackman & Oldham, 1980). This overall motivating job potential can be determined by computing a motivating potential score (MPS) that is calculated as shown in Table 3. As indicated, the MPS is a formula whereby skill variety, task identity, and task significance are summed and divided by three, then multiplied by autonomy. The resulting numerical outcome is then multiplied by job feedback.

Table 3. The MPS Formula as Computed by Hackman and Oldham (1975)

$$\text{MPS} = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \text{ X Autonomy X Job Feedback}$$

Kulik, Oldham, and Hackman (1987) asserted that a job in motivating potential must be high on at least one of the three characteristics that comprise experienced meaningfulness, meaningfulness of work, responsibility for work outcomes, and the knowledge of employee work results as well as high on both autonomy and job feedback. A job situation that has either low autonomy or low job feedback directly affects the overall motivating force of work. On the other hand, Hackman and Oldham (1980) argued that a low score on one of the three characteristics that lead to experienced meaningfulness cannot affect the overall motivating potential of a job seriously since the

other characteristics that prompt experienced meaningfulness can compensate for low scores on one or perhaps two of these three characteristics.

Job Characteristics and Organizational Commitment

While the Job Characteristics Model does not directly mention commitment as an outcome, there is sufficient empirical support to suggest that the job characteristics also affect organizational commitment (Ashforth, Saks, & Lee, 1998; Colarelli, Dean, & Constans, 1987; Dunham, Grube, & Castaneda, 1994; Fried, Slowik, Ben-David, & Tiegs, 2001; Kwon & Banks, 2004; Morrow, 1993; Sneed & Herman, 1990; Steers, 1977; Turner, 2008; Ugboro, 2006). According to Tepper, Shafer, Meredith, and Marsh's (1996) interpretation, the JCM provides some freedom with regard to what attitudinal or behavioral outcomes (Champoux, 1991) may be related to changes in enrichment strategies that give scholars numerous opportunities to explore outcome variables that have relevance to specific contexts. For example, although not identified in the formal version of the theory, Hackman and Lawler (1971) investigated the relationship between job characteristics and job involvement. Similarly, although Tepper et al. (1996) did not find any research on the relationship between the five job characteristics and organizational commitment, they believed that it was an appropriate outcome variable in JCM research by arguing that the content areas captured by well-developed organizational commitment questionnaires were consistent with work outcomes that others recognized as acceptable. In addition, Mowday et al. (1982) stated that much work has been carried out that investigated the relationship between job characteristics and organizational commitment. Here, the basic proposition is that increased job

characteristics also increase the challenges that employees experience and as a result increases organizational commitment. According to Mowday et al. (1982), when job scope is viewed as a summary construct of certain core job dimensions (e.g., variety, autonomy, significance, and feedback), that is clearly why higher levels of commitment are often found among employees who have higher job scopes. Thus, these job characteristics may positively affect the behavioral involvement of employees and increase their feelings of responsibility.

Skill Variety, Job Feedback, and Organizational Commitment

Extant research has provided empirical evidence for the correlation of each job characteristic and organizational commitment. For example, Glisson and Durick (1988) analyzed the effect of job characteristics on organizational commitment by including 319 subjects from 47 work groups in 22 human service organizations. The three job characteristics─skill variety, task identity, and task significance─that Glisson and Durick included into their study were measured with the modified scale developed by Hackman and Oldham (1980). According to their findings, job characteristics, particularly skill variety, played a significant yet smaller role in predicting organizational commitment. Glisson and Durick (1988) argued that the findings of their study allowed researchers to draw conclusions regarding the role that job characteristics play in affecting the attitudes of employees performing human related tasks while controlling for and assessing the unique effects of other variables correlated with job characteristics that describe the employee as well as the organization.

Similarly, Allen, Lambert, Pasupuleti, Tolar, and Ventura (2004) examined the effects of job characteristics on organizational commitment. According to these researchers, most scholars to date have focused on the impact of job characteristics on job satisfaction with little attention being paid to organizational commitment. Thus, Allen et al. believed that there was a need to study the impact of job characteristics on organizational commitment among human service employees with skill variety being hypothesized to have a positive affect. They argued that most employees do not like repetitive jobs but rather tend to be appreciative of organizations that provide them with jobs that allow them to experience and learn new things. In retrospect, this also allows the organization to be observed in a more positive light that produces higher levels of organizational commitment. Allen et al's (2004) findings supported their assumptions and hypotheses regarding the relationship between job characteristics and organizational commitment. In other words, skill variety had a positive correlation with organizational commitment.

In a recent study that utilized canonical correlation analysis, Reid, Riemenschneider, Allen, and Armstrong (2008) strived to determine whether skill variety and affective commitment were statistically independent of one each other. If not, then the magnitude of the multivariate relationship might be found. The researchers utilized an on-line web survey to obtain data from state government employees by using Mowday et al.'s (1979) scale to measure affective organizational commitment and Cammann, Fichman, Jenkins, and Klesh's (1979) scale to measure skill variety. Although different scales were used for skill variety and affective commitment when compared to other

researchers mentioned, Cammann et al. still found a positive relationship between skill variety and affective commitment.

In contrast to other researchers, Bhuian et al. (1996) conducted research in Saudi Arabia, a non-Western country, in order to explore the nature of commitment and characteristics and the nature of the relationship between job characteristics and organizational commitment. Organizational commitment was measured using the scale developed by Hunt, Chonko, and Wood (1985). Again, in contrast to Hackman and Oldham's (1975, 1976, 1980) model, Hunt et al. used the Job Classification Index that included four dimensions of job characteristics: (a) autonomy, (b) identity, (c) feedback, and (d) variety. Their regression equations reported strong support for the influence of variety on commitment.

Finally, Sneed and Herman (1990) conducted a study to determine the relationship between job characteristics, organizational commitment, job satisfaction, and demographic variables by utilizing a multiple linear regression to test the degree in which job characteristics predicted organizational commitment among hospital employees. In general, the model was significant for both supervisory and nonsupervisory employees, and job characteristics were found to be predictors of organizational commitment. For supervisors, however, skill variety was a significant characteristic, and both skill variety and feedback were positively related to organizational commitment for nonsupervisory employees. In two similar studies, Steers (1977) also found positive feedback to be an antecedent to commitment among a group of scientists and engineers, and Hutchinson and Garstka (1996) revealed that its presence was most closely related to productive work

attitudes and greater organizational commitment among specific populations. Essentially, feedback serves as a method for employers to provide their employees with the benefit of realizing their job outcomes as well as reassuring them that their performance is recognized by the organization. As a result, employees will become more responsible for their actions, which, in turn, may increase their affective organizational commitment.

Although researchers have investigated the relationship between job characteristics and affective commitment extensively, there have been relatively few empirical studies conducted (Dunham et al., 1994; Meyer & Allen, 1997; Schneider, 2003; Turner, 2008) wherein the relationship between job characteristics relative to normative and continuance commitment are examined. While Schneider (2003) reported a positive relationship between feedback, skill variety, and normative commitment, the only positive and significant correlation resulted between feedback from agents and normative commitment. In other words, the positive relationship found between skill variety and normative commitment was not significant. The results also indicated that there was a positive relationship between feedback and continuance commitment; however, the relationship between skill variety and continuance commitment was negative. More important to note, both relationships were insignificant. The findings from Schneider's study partially supported Allen and Meyer (1997) who reported a negative correlation between job characteristics and continuance commitment.

H_6. Skill variety is positively related to affective and normative commitment but negatively related to continuance commitment.

H_7. Job Feedback is positively related to each component of organizational commitment (affective, continuance, and normative commitment).

Autonomy and Organizational Commitment

Like skill variety and job feedback, autonomy is also believed to be an essential job characteristic that encourages an employee's sense of responsibility as well as a concurrent feeling of commitment toward accomplishing organizational goals (Huang, 2004). Mathieu and Zajac (1990) reported a small positive relationship between autonomy and affective organizational commitment. Other researchers including Hackman and Lawler (1971) and Hackman and Oldham (1975) supported the idea that employees who exhibit more self-determination in performing their roles also display favorable attitudes toward their jobs, more responsibility toward meeting organizational goals, and thus a higher organizational commitment (Huang, 2004).

Based on organizational commitment literature and theoretical backgrounds, Allen et al. (2004) hypothesized that job autonomy has a positive impact on organizational commitment. Accordingly, most employees enjoy having a degree of control in what they do and how they accomplish a given task. On the other hand, Allen et al. believed that employees who have little say so in how they perform their jobs and related tasks will likely become more frustrated by their workload thus leading to a decrease in positive job outcomes. Therefore, employees should be more willing to identify with and extend their efforts towards organizations that provide them with the opportunity to maintain a higher degree of control over their jobs, and as such, become more committed to their respective organizations. Using Curry, Wakefield, Price, and

Muller's (1986) 2-item scale to measure job autonomy, Allen et al. (2004) found job autonomy to have a statistically significant correlation with organizational commitment, as hypothesized. Their research findings confirmed that all job characteristics consisting of skill variety, task identity, task significance, and feedback are important determinants of organizational commitment, including job autonomy. Since autonomy deals with the job, it was expected to help form organizational commitment. Therefore, an increase in job autonomy should be addressed to improve organizational commitment among public employees (Allen et al., 2004).

Across a variety of employee samples, affective commitment has been shown to be positively correlated with the degree of autonomy (Colarelli et al. 1987; Dunhan et al., 1994; Steers, 1977). Using Hackman and Oldham's (1975) Job Characteristics Model as a theoretical basis, Dunham et al. (1994) employed a job diagnostic survey to measure task identity, task significance, skill variety, autonomy, and feedback in which all were found to be positively correlated to affective organizational commitment. In terms of affective commitment, Eby et al. (1999) found several significant direct paths including autonomy.

Iverson and Buttigieg (1999) examined the multidimensionality of organizational commitments (affective, continuance, and normative) and how they are differentially related to antecedents, including job characteristics. They found a positive relationship between autonomy and affective commitment and normative commitment; however, autonomy was negatively related to continuance commitment. Although autonomy had an impact on affective, continuance, and normative commitment, the magnitude of the

relationship was weak. Findings of Iverson and Buttigieg's study partially supported Allen and Meyer's (1990) analyses related to job characteristics and the 3-component of organizational commitment. Similar to Iverson and Buttigieg, a positive relationship with affective commitment and a negative relationship with continuance commitment were also reported by Allen and Meyer. However, they did not find any relationship between autonomy and normative commitment.

In order to evaluate affective, continuance, and normative commitment among correctional staff, Lambert et al. (2008) conducted research in a criminal justice setting. Multivariate analysis taken from the results of a survey comprised of 272 correctional staff working in a high-security prison revealed that the effects of autonomy varied depending on which component of organizational commitment was measured. More specifically, the relationship between autonomy and affective and normative commitment were positive, whereas the correlation between autonomy and continuance commitment was negative. Again, however, the significance of all effects of autonomy was weak.

Schneider (2003) investigated the relationship between job characteristics and affective, continuance, and normative commitment using Pearson's correlation coefficients to produce correlation matrixes that would indicate if any significant associations existed between job characteristics and organizational commitment. Although the findings did not reveal any significant relationship between affective commitment and autonomy, there was a significant negative relationship between autonomy and continuance commitment that could be explained by understanding how the constructs were developed. According to Hackman and Oldham's (1975, 1980)

explanation, autonomy is the degree to which a job provides substantial freedom of independence and discretion to the individual in scheduling work. In addition, continuance commitment is a result or action that increases an employee's cost of leaving an organization (Meyer & Allen 1997). Thus, employees tend to exhibit a weak sense of continuance commitment if they recognize that there more alternative options available in leaving their organization.

In Dee, Henkin, and Singleton's (2006) research that focused on the organizational commitment of elementary school teachers, the magnitude of the relationship between autonomy and commitment was not weak. Rather, they reported that autonomy had the second largest effect in each path analysis. For example, the results indicated that the relationship between autonomy and affective commitment was positive and very significant. As Hawkins (1998) argued, autonomy is considered to be a prominent factor in the study of affective organizational commitment. In other words, if management only addresses discipline, authority, and control, then employee erosion of commitment will become inevitable, or commitment will not develop in the first place. To conclude, reasonable autonomy produces an organizational climate that allows affective organizational commitment to develop.

H_8. Autonomy is positively related to affective and normative commitment but negatively related to continuance commitment.

Task Identity, Task Significance, and Organizational Commitment

Eby et al. (1999) identified skill variety, task identity, and task significance as three attributes of Hackman and Oldham's (1975) Job Characteristics Model that are

relevant to the meaningfulness of work and thus organizational commitment. They reasoned that in terms of the perception of meaningfulness, jobs that provide an opportunity to use a variety of skills that have an impact on other's lives (task significance) and require the completion of a whole or identifiable product (task identity) should produce employee commitment. However, task significance was removed from Eby et al.'s proposed model before conducting data analysis. Using Hackman and Oldham's (1976) Job Characteristics Model as a basis, a series of theoretically based models were tested that yielded insight into mechanisms that could perhaps foster affective commitment. Eby et al. found a negative relationship between task variety and organizational commitment that was unexpected and reflected suppressor effects that can arise in regression-type of models having multiple correlated independent variables.

Again using Hackman and Oldham's (1975) framework, Dunham et al. (1994) investigated the five job characteristics and their relationship to organizational commitment. All were found to be positively related to affective commitment including task identity and task significance; however, there was no relationship between task identity and task significance in relation to normative commitment. In addition, Dunham et al. did not analyze the relationship between job characteristics and continuance commitment due to their belief that it would be unlikely for task characteristics to be related to continuance commitment. However, they suggested that this situation might change in future research as a function of the perceived likelihood that an employee could find alternative work with similar desirable job characteristics. For example, to the extent that employees might believe that task significance is higher in their present job as

opposed to an alternative one, they would perhaps view this as something that would be sacrificed if they left the organization. From another point of view, if employees perceive task significance to be present in many other jobs, the relationship with continuance commitment would be low.

Glisson and Durick (1988) further reported that skill variety and task significance represented only two job characteristics that are significantly related to organizational commitment. Similarly, Steers (1977) found that task significance and task identity were the only two variables that were significantly correlated to organizational commitment. More recent research conducted by Batt and Applebaum (1995) also supported previous studies by finding a significant relationship between both task significance and task identity to organizational commitment. Schneider (2003) provided further support for the relationship between Hackman and Oldham's (1975) Job Characteristics Model and Meyer and Allen's (1991) 3-component model of organizational commitment. More specifically, Schneider found a positive relationship between task identity and the 3-component model of organizational commitment (e.g., affective, continuance, and normative). While task significance was positively related to affective and normative commitment, the relationship was negatively associated with continuance commitment. Schneider's finding can be explained by Dunham et al.'s (1994) argument that if task significance is perceived to be present in many other jobs, its relationship to continuance commitment will be low.

H_9. Task identity is positively related to each component of organizational commitment (affective, continuance, and normative).

H_{10}. Task significance is positively related to affective and normative commitment but negatively related to continuance commitment.

Motivating Potential Score and Organizational Commitment

Notably, when researchers entered all job characteristics into their models' analyses as a group, they found more significant results in relation to organizational commitment. According to Hackman and Oldham's (1975) Job Characteristics Model discussed in the previous section, five core characteristics determine job outcomes. The motivating potential score (MPS) reflects the complexity or scope of a job. Task identity, task significance, and skill variety are averaged and then multiplied by job feedback and autonomy to find MPS. The multiplicative nature of this formula implies that a job must induce all three psychological states in order to be motivating. Assumedly, the higher the MPS or scope of a job, the more committed the employee will be. For example, when Steers (1977) entered autonomy, variety, feedback, and task identity into a regression model as one group of variables, all were related to organizational commitment. However, when job characteristics were entered separately, Steers found that only two were related to organizational commitment. In the same vein, Griffin (1991) investigated the correlation between job characteristics and organizational commitment by calculating the overall motivation score and then examining the relationship over time between the motivating potential score and criterion four times. At each point, the MPS was significantly and positively correlated to organizational commitment. Griffin found these relationships without examining the moderating impact of an employee's growth need strength (GNS). According to Whittington and Evans (2005), Griffin's findings suggest

that the relationship between job characteristics as measured by MPS and a variety of criterion variables is more direct than examining the moderating effects of employee GNS. Thus, MPS is positively related to a wide variety of positive job outcomes, including organizational commitment and performance.

Similarly, Nogradi, Yardey, and Kanters's (1993) research aimed to assess the relationship between work-related attention, the motivating potential of jobs, and selected job effectiveness outcomes. Job satisfaction, organizational commitment, motivation to work, and propensity to leave an organization were selected as job effectiveness outcomes due to the critical role they play in organizational success and their influence on the 5 job characteristics. The results of Nogradi et al.'s study indicated that MPS (reflective of the degree to which the five job characteristics are enriched) is significantly related to job effectiveness outcomes. In other words, MPS had a significant main (direct) effect on organizational commitment, job satisfaction, motivation to work, and propensity to leave an organization.

H_{11}. Motivating Potential Score (MPS) is positively related to each component of organizational commitment (affective, continuance, and normative).

Growth Need Strength and Organizational Commitment

Hackman and Oldham's (1975) Job Characteristics Model (JCM) also identified the moderating effect between the relationships described above and an employee's level of GNS. According to Whittington and Evans (2005), researchers often overlook the moderating role of employee GNS on positive job outcomes. Hackman and Oldham (1975) argued that the relationship between the five job characteristics and outcomes are

moderated by an employee's GNS. According to Greenberg and Baron (2003), however, the JCM does not apply to everyone. For example, the model is especially effective in describing the behavior of employees who are high in GNS. In other words, all job characteristics may be significantly and positively related to organizational commitment; however, this does not mean that every employee desires more variety, more autonomy, and so forth. As a moderator, GNS may influence the strength of the relationships between variables. If employees lack the required knowledge, skills, or desire for growth and development, more variety and autonomy should not increase their affective outcomes to the organization.

H_{12}. Growth Need Strength (GNS) will moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and each component of organizational commitment (affective, continuance, and normative).

Role Related Characteristics

Another related aspect of employment that has been widely studied consists of role related variables, namely role ambiguity, role conflict, and role or work overload (Adkins, 1995; Bedian & Armenakis, 1981; Bruning & Snyder, 1983; Gaertner, 2000; Lambert et al., 2008). According to Johnston, Parasuraman, Futrell, and Black (1990), these role variables are also job characteristics. Although Mowday et al. (1982) did not clearly point out role conflict, role ambiguity, and role overload to be considered as job characteristics, they included these variables along with others under the general umbrella of role related antecedents. Hence, it appears to be appropriate to consider role conflict,

role ambiguity, and role overload as implicitly fitting under job characteristics as well (Johnston et al., 1990). A theoretical framework that deals with the complexity of organizational settings and includes individual factors was developed and advanced by Kahn, Wolfe, Quinn, Snoek, & Rosenthal (1964) and Katz and Kahn (1978) who stated that the context of role taking is important in understanding how multiple factors affect organizational behavior. Katz and Kahn's (1978) role theory emphasizes that organizational structure can be viewed as a series of motivated patterned behaviors associated with fulfilling organizational tasks. These behaviors shape the organizational roles that link employees to their work groups in order to carry out assigned tasks. Based on these statements, when role behaviors are performed in an expected manner, the organization will operate effectively and efficiently. According to Katz and Kahn (1978), role expectations are largely determined by organizational factors such as technological prescriptions, job characteristics, formal existing policies, and a set of rewards and penalties. If these expectations are ambiguous or contradicted by other policies or organizational administrators, then role stress results. The complexity of the behavioral demands of a particular role may produce stress in the form of role conflict, role ambiguity, or role overload.

Role Conflict and Role Ambiguity

One type of role theory asserts that when behaviors expected of an employee are inconsistent, the employee will experience stress, become dissatisfied (Rizzo et al., 1970), indicate lower commitment (Yousef, 2002), and perform less effectively than if the expectations imposed did not conflict (Rizzo et al., 1970). Therefore, role conflict can

be viewed as resulting from a violation of the two classical principals and causing decreased employee commitment and decreased organizational effectiveness. Another role related characteristic, role ambiguity, represents a condition that results from uncertain information regarding role behavior (Kahn et al., 1964). Kahn et al. defined role ambiguity as the unpredictability of consequences relating to one's role performance. For example, a lack of necessary information to an assigned organizational position may result in coping behavior by the role incumbent that may take the form of attempts to solve the problem in order to overcome the sources of stress or to use defense mechanisms that distort the reality of the situation. Under these circumstances, role theory assumes that ambiguity increases the probability that an employee will be unhappy with his or her role, will exhibit anxiety, will distort reality, and will perform less effectively (Rizzo et al., 1970).

Role Conflict, Role Ambiguity, and Organizational Commitment

A number of researchers have examined the relationship between role related characteristics and organizational commitment (Billingsley & Cross, 1992; Iverson, 1999; Jaramillo et al., 2005; Lambert, Hogan, & Jiang, 2008; Mayer & Schoorman, 1998; Mowday et al., 1982; Stevens et al., 1978; Yousef, 2002). In organizational behavior literature, inconsistent findings have been reported in regards to the relationship between role related variables and organizational commitment. For example, some scholars have revealed that role related variables are negatively related to organizational commitment (Lopopolo, 2002; Morris & Koch, 1979; Morris & Sherman, 1981; Stevens et al., 1978), while others have found a positive relationship between variables (Gregersen & Black,

1992; LeRouge, Nelson, & Blanton, 2006; Manheim & Papo, 2000). Mowday et al. (1982) argued that the impact of role related variables on commitment may be positive when employees have clear and challenging job assignments. Conversely, when assignments become ambiguous, place the employee in conflict, or provide excessive role stress, the impact on organizational commitment will be negative. Further, researchers have not found any significant relationship, or a very weak one, between role related variables and organizational commitment (Jaramillo et al., 2005; Newman & Rucker-Reed, 2004; Sigler, 1988). The existing research that provides empirical evidence for each of these relationships is presented below.

Billingsley and Cross (1992) identified variables that influence commitment and job satisfaction among a random sample of 589 general educators and 558 special educators in Virginia through a mailed survey questionnaire consisting primarily of extant measures. From the independent variables, role conflict and role ambiguity were measured using a questionnaire adapted from an earlier one developed by Rizzo et al. (1970). When separate regression analyses were used to regress commitment related to role conflict and role ambiguity, the results indicated that role characteristics rather than personal characteristics were better predictors of organizational commitment among general and special educators whereas role conflict and role ambiguity were negatively related.

Michaels, Cron, Dubinsky, and Joachimsthaler (1988) examined a model to determine whether organizational formalization affected work alienation through role ambiguity, role conflict, and organizational commitment. Interrelationships were tested

with data provided by a sample of salespersons and industrial buyers. Michaels et al. utilized Rizzo et al.'s (1970) scale to measure role conflict and role ambiguity and Mowday et al.'s (1979) one-dimensional model of organizational commitment. As expected, higher levels of role conflict and ambiguity were correlated with lower levels of organizational commitment, a pattern that was identical in both varied samples.

By using a longitudinal field design survey that was administered three different times, Adkins (1995) examined the relationship between previous work experience and job characteristics and outcomes in the socialization process by using a sample comprised of 171 health specialists employed by seven inpatient facilities of a state mental health department. For statistical purposes, correlation analysis was the method used to determine the relationship between role ambiguity, role conflict, and organizational commitment. Similar to the previously mentioned studies, Adkins used Rizzo et al.'s (1970) instrument scale to measure role ambiguity and role overload in addition to Porter and Smith's (1970) organizational commitment questionnaire. Results indicated that role ambiguity and role conflict were the most consistent predictors of job satisfaction and organizational commitment although negatively correlated to organizational commitment at all three survey times.

Bedeian and Armenakis (1981), Brooke, Russell, and Price (1988), Bruning and Snyder (1983), and Dubinsky and Mattson (1979) also found that higher role ambiguity and/or role conflict were associated with lower organizational commitment when Rizzo et al.'s (1970) measurement scale was employed. Overall, the researchers suggested that when employees are uncertain about the manner in which they are to perform their jobs,

they exhibit lower organizational commitment than when they know exactly how their jobs are to be performed. The role variables examined in all of these studies achieved an even greater importance because they appeared to have direct effects on organizational commitment.

While most research has resulted in a negative relationship between role variables and various components of organizational commitment, opposite findings have also been reported by organizational commitment researchers. For example, in a study consisting of 321 managers on international assignment in the Pacific Rim and European countries, Gregersen and Black (1992) theoretically and empirically investigated the extent to which various employee job and nonjob factors accounted for commitment to their motherland companies or to their foreign operations. After questionnaires were mailed and returned from 250 selected managers located in Japan, Korea, Taiwan, Hong Kong, Belgium, England, The Netherlands, and West Germany, the researchers utilized one-way ANOVA and regression analyses on the dependent variable−commitment to a motherland company or to a foreign operation. Although Gregersen and Black predicted that role ambiguity and role conflict would be negatively correlated to organizational commitment, regression analysis was found to be the only role conflict that was related to commitment to a motherland company, and neither variable was related to commitment to a foreign operation. Moreover, findings rejected a hypothesized negative relationship between role ambiguity and commitment. According to Gregersen and Black, a determination was argued that upper level managers who work in overseas job assignments that are researched by their motherland are by nature ambiguous and may

accept this ambiguity without a significant effect on commitment to either their mother country or to a foreign operation. On the other hand, results supported the negative relationship between role conflict and commitment to both entities.

A more recent study conducted by Jaramillo et al. (2005) was designed to investigate and determine the effects of internal police stress (role ambiguity, role conflict, supervisor support, group cohesiveness, and promotion opportunities) related to organizational commitment. Based on empirical evidence of a negative relationship existing between role ambiguity and role conflict within police organizations, Jaramillo et al. hypothesized that both variables would be strongly and negatively related to organizational commitment of police officers. The underlying research hypotheses were tested using responses to 150 surveys from police officers who represented 6 different law enforcement agencies. The results, however, did not support previous research. In contrast to common views, role conflict and role ambiguity were insignificant predictors of organizational commitment. In addition, partial correlations used to analyze the magnitude of the relationship between a dependent variable and a single independent variable when the effects of other variables were held constant was also found to be insignificant.

Studies discussed thus far have been generally based on one-dimensional organizational commitment. Although little research focused on the relationship between role characteristics and various components of organizational commitment, results typically supported previous research that dealt with the one-dimensionality of organizational commitment. For example, Mayer and Schoorman (1998) examined the

antecedents of both affective and continuance commitment in their field study by using the 2-dimensional organizational commitment questionnaire adapted from an earlier study they conducted in 1992. As a rule, analysis using LSREL supports the pattern of relationship between the antecedents and two commitment dimensions. Similar to Billingsley and Cross (1992), role ambiguity was measured by Mayer and Schoorman based on Rizzo et al.'s (1970) 5-item scale. Their results suggested that role ambiguity was negatively related to both affective and continuance commitment.

Tao, Takagi, Ishida, and Masuda (1998) gathered data from 203 employees who were employed by various companies in Japan in order to determine the best predictors of affective, continuance, and normative commitment through multiple regression analysis. In regard to role ambiguity and role conflict, findings indicated that only role ambiguity had a significant negative effect on normative commitment; however, the effect of role ambiguity on continuance and affective commitment and the effect of role conflict on the 3-components of organizational commitment were insignificant. According to Tao et al., when the role is ambiguous, an event that does not have a direct relationship to an employee's job or work might be important in accounting for their remaining with the organization which could result in greater significance concerning normative commitment, namely consideration for others such as families, relatives, and neighbors.

Finally, Yousef (2002) investigated the direct and indirect effects (mediating role) of role stressors, namely role conflict and role ambiguity, on affective, continuance, and normative commitment in the United Arab Emirates. In general, the results revealed that role variables both directly and negatively influenced organizational commitment. Yousef

further found that there was a negative and significant relationship between role conflict and affective and normative commitment, but a positive relationship between role conflict and continuance commitment. In addition, a strong negative relationship was found between role ambiguity and affective commitment and a moderate relationship between role ambiguity and normative commitment. Similar to role conflict, role ambiguity was also positively related to continuance commitment.

H_{13}. *Role ambiguity is negatively related to affective and normative commitment but positively related to continuance commitment.*

H_{14}. *Role conflict is negatively related to affective and normative commitment but positively related to continuance commitment.*

Role (Work) Overload

The third role-related characteristic is role overload that refers to the number of different roles an employee must carry out. For example, when role demands produce the perception that available resources are not enough to deal with, employees experience role overload (Kahn et al., 1964). Spector and Jex (1998) viewed the pattern of relations with role overload slightly different from role conflict and role ambiguity related characteristics. More specifically, while role conflict and role ambiguity are generally considered to be psychological stressors and the product of an employee's interaction, role overload relates to tasks rather than employees. In other words, simply having a large amount of work does not necessarily lead to distress in the same way that role ambiguity and role conflict might. As an example, employees may enjoy their work and may not consider having to do more than their share unpleasant. On the other hand, role overload

involves an extensive and growing problem in numerous work environments. According to Brown, Jones, and Leigh (2005), role overload is likely to interfere with employee effectiveness and interrupt positive outcomes such as high work satisfaction or employee commitment.

Overload can be divided into two categories, namely (a) qualitative and (b) quantitative. When employees feel that they are assigned too much work to complete, too many different tasks to perform, or insufficient time devoted to their responsibilities, they may experience quantitative overload. In many organizations, this may stem from a lack of resources or the threat of cutbacks. On the other hand, employees who experience qualitative overload believe that they lack the basic skills or talents necessary to effectively complete a task. Regardless of the reason, role overload as well as role conflict and role ambiguity negatively affect work outcomes (Spector, 1985).

Role Overload and Organizational Commitment

Besides role conflict and role ambiguity, role overload has also been found to have important influences on organizational commitment (Dougherty & Cordes, 1993; Houkes, Janssen, Jonge, & Nijhuis, 2001; Stevens et al., 1978). According to Stevens et al., role variables hold more dynamic aspects of a job situation that may result in staying with a given organization more or less attractive at a given point in time. In this case, "work overload would be perceived as a cost and negatively affect commitment" (p. 384). By applying the role and exchange theory, Stevens et al. examined employees' commitment to their organization as related to 634 managers in 71 government organizations. As predicted, they found that role overload was negatively related to

organizational commitment. In fact, role overload emerged as the largest negative predictor, providing support to the exchange or Becker's (1960) side bet approach to commitment. The research findings indicated that managers who perceived of themselves as having too little authority to carry out their responsibilities, being disturbed by role overload, and having to finish the work of others exhibited low commitment. According to Stevens et al., this was encouraging given that their study included a variable which was easier to change than various others. In other words, management can change structural or other factors that result in overload before its influences can cause negativity on employee commitment.

Karsh, Booske, and Sainfort (2005) also investigated the effects of role overload on organizational commitment by applying a self-administered questionnaire to obtain data from a total of 6,584 nursing home employees representing 76 nursing homes. Although Karsh et al. did not report any significant relationship between role overload and affective commitment among nursing home employees, the results of their survey supported Curry et al.'s (1986) study that found role overload to be unrelated to organizational commitment yet have a significant effect of job satisfaction. Wiley (1987), however, reported that role overload was significantly and negatively related to organizational commitment.

Dougherty and Cordes (1993) conducted further empirical research in order to identify the relationship between work overload and emotional exhaustion. Accordingly, when employees believe that they are overloaded and feel a sense of emotional exhaustion, they tend to perform ineffectively in their responsibilities and commitment to

their respective organizations. Under these conditions, a high qualitative or quantitative role overload may result in feelings of being less committed to the organization.

As a segment of a study conducted by Riley (2006), the correlation between role overload and affective and continuance commitment among health service employees in New Zealand was examined by administering an employee questionnaire to gather data. Riley used multiple regression analyses to analyze the data, Allen and Meyer's (1996) affective and normative commitment scale to measure commitment, and Bolino and Turnley's (2005) scale to assess role overload. As expected, the findings revealed that a negative relationship existed between role overload and affective commitment; however, in contrast to Riley's hypotheses, a negative relationship resulted between role overload and continuance commitment. Although the expectation related to continuance commitment was rejected, Riley argued that an employee's desire to stay with the organization was due to inducements offered, namely retirement benefits and membership status within the organization. Thus, an employee who feels high work overload may also experience high continuance commitment to the organization.

H_{15}. Role overload is negatively related to affective and normative commitment but positively related to continuance commitment.

Job Satisfaction

Given its crucial factor in understanding employees' affective reactions to the organization, job satisfaction has most likely received more attention than any other single subject from organizational research scholars (Falkenburg & Schyns, 2007). Therefore, managers in today's organizations have placed great importance on the issue

of job satisfaction expressed by their employees (Yew, 2008). A review of published works indicates that there are numerous ways of defining job satisfaction. For example, Locke (1976) defined the term as "a pleasure or positive emotional state resulting from the appraisal of one's job or job experience" (p. 1300). According to Porter, Lawler, and Hackman (1975), job satisfaction is a feeling about a job determined by the difference between the amount of a certain valued outcome that an employee will receive and the amount of outcome that the employee should receive. Although definitions vary, there appears to be general agreement in the literature that job satisfaction is an emotional reaction to a job that results from the incumbent's comparison of actual outcomes with those that are desired (Cranny, Smith, & Stone, 1992).

Intrinsic, Extrinsic, and Overall Job Satisfaction

Locke (1976) asserted that job satisfaction is not a univariate concept and suggested that in order for researchers to understand job attitudes, they must understand certain job satisfaction aspects (i.e., work, pay, promotions, recognition, benefits, working conditions, supervision, coworkers, company and management, etc.) that are complex and interrelated in nature. Other researchers indicated that these different aspects can be conceptualized and operationalized in a variety of ways, namely intrinsic, extrinsic, and overall or general job satisfaction (Bhuian, et al., 1996; Hirschfeld, 2000; Naumann, 1993; Spector, 1997; Weiss et al., 1967). Extrinsic satisfaction focuses on aspects of work that have little to do with job tasks or the work itself such as pay (Spector, 1997), working conditions, security, supervision, and status (Herzberg, 1968; Weiss et al., 1967). On the other hand, intrinsic satisfaction refers to the nature of job

tasks themselves and how people feel about the work they do (Spector, 1997), namely achievement, recognition, responsibility, and advancement (Herzberg, 1968; Weiss et al., 1967). Intrinsic satisfaction is derived from actually performing the work and experiencing feelings of accomplishment, self-actualization, and identity with a given task, whereas extrinsic satisfaction is derived from the rewards an employee receives by his or her colleagues, superiors, or the organization. In other words, while intrinsic job satisfaction represents an individual's satisfaction with the nonmonetary, qualitative aspect of work, extrinsic job satisfaction generally represents the quantitative aspect of work (Markowitz & Davis, 2007).

Hirschfeld (2000) argued that evidence exists that supports some degree of discriminant validity between intrinsic and extrinsic job satisfaction in their correlation with other relevant variables. For example, Arvey, Bouchard, Segal, and Abraham (1989) suggested that job satisfaction dimensions or elements that explicitly represent extrinsic work environmental factors are less likely to indicate genetic job components related to satisfaction facets that may reflect more direct job experiences by employees (i.e., the intrinsic aspect of job satisfaction). In addition, Moorman (1993) pointed out that while intrinsic job satisfaction has an effective basis, extrinsic job satisfaction does not.

The final aspect of job satisfaction is labeled as general job satisfaction. Hackman and Oldham (1980) described general job satisfaction as an aggregation of satisfaction with various job facets or an aggregation of only a few measures of general satisfaction. Although no best conceptualization of job satisfaction has emerged in the organizational behavior literature, the extrinsic and intrinsic distinction appears to be appropriate from

an international context (Naumann, 1993). According to Spector (1987), it is also useful to use multidimensional measures of job satisfaction because the components may relate differently to other variables of interest in a manner that advances the science and practice of industrial-organizational psychology. Thus, all of the three conceptualizations of job satisfaction are included in my research. The short form of the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss et al. (1967) is considered as a popular facet measure that is frequently used in job satisfaction research. In my study, the MSQ is utilized in order to measure general job satisfaction and 2 distinct components: (a) intrinsic and (b) extrinsic. A detailed discussion of the MSQ is provided in the methodology section of my research.

Intrinsic and Extrinsic Job Satisfaction Theories

Because there is no consensus regarding job satisfaction theories, most approaches are grounded in more general theories of motivation (Campbell, Dunnette, Lawler, & Weik, 1970; Gruneberg, 1979; Rowley, 1996). For example, Campbell et al. (1970) divided the theories of job satisfaction into two main categories: (a) content theories and (b) process theories. Content theorists explained the factors that influence job satisfaction and assumed that factors exist within the individual or workplace that motivate and support behavior. For example, Maslow's (1943, 1954) Needs of Hierarchy Theory and its development by Herzberg (1959) into the 2-factor theory of job satisfaction are considered under the content theory. On the other hand, process theorists often explained the process by which variables such as expectations, needs, and values interact with job characteristics to produce job satisfaction. Equity theory, reference

group theory, and need and value fulfillment theory can be considered under this heading according to Gruenberg (1979).

According to Holland (1989), the manner in which an organization relates to its employees is based on management's view of the nature of employee. Holland proposed four basic theories of the nature of employee as reflected in managerial behavior and attitudes toward the organization that establish and influence the organization's managerial structure. Schein (1965) and Holland (1989) referred to these four basic models as (a) the rational-economic employee, (b) the social employee, (c) the self-actualizing employee, and (d) the complex employee. The first three models can be considered as content theories of job satisfaction. Although they were initially developed some time ago, they are still a useful framework in understanding an employee's attitude and behavior. The fourth model, the complex employee, introduces some aspects of the process theories of job satisfaction (Rowley, 1996). For the purpose of my study, these four models of job satisfaction or content theories are used to explain the sources of intrinsic and extrinsic job satisfaction and their possible effects on overall job outcomes (organizational commitment).

The Rational Economic Employee

Assumedly, the rational economic employee model originated from the philosophy of early English utilitarian economists. The basic assumption in this management model is that an employee will balance the amount of satisfaction he or she has achieved from an action and has the ability to act on his or her own self-interests to maximize profits from the total effort taken to achieve the action. According to Holland

(1989), financial gain is the rational economic employee's main satisfier; thus, he or she will act as much as possible to increase his or her financial and material rewards (Rowley, 1996). The rational economic employee theory assumes that because organizations are the most capable of providing economic incentives, they may satisfy and guide the employee's attitudes or behavior. Another assumption is that rational economic employees' unconscious drives are intrinsically irrational and prevent the logical calculation of self-interests. Consequently, organizations must monitor and neutralize these employees' irrational feelings and direct them to meet their self-interest objectives (Holland, 1989). Based on these characteristics, job satisfaction can be controlled by an organization through offering or withholding economic employee incentives. According to Rowley (1996), the rational economic employee model is generally related to Taylor's Scientific Management Theory and McGregor's Theory X (Rowley, 1996).

In the early 20th century, organizations and scholars directed little attention to job satisfaction and its related outcomes. However, Frederick Winslow Taylor advanced the concept of scientific management in 1911 (Greenberg & Baron, 2003) with the main purpose of eliminating natural laziness in the workplace since he believed that all workers spent little time in putting forth their full efforts. To accomplish this goal, he analyzed jobs in a scientific way in order that no one could doubt how much work could and should be done in a day. According to Draper (1997), time-study played an important role in Taylor's scientific job (Draper, 1997). Briefly, Denhardt (2004) argued that there is one best method to achieve a goal, the most important of which is to discover

how the method works. The underlying theme of scientific management is the assumption that employees are passive, are inclined to assert less rather than more effort, are unwilling to take responsibility, and are interested what they can financially get out of work. According to scientific management, all employees can be motivated by financial incentives without even thinking about the possible emotional impact and psychological factors (Taylor, 1967).

Another theory related to the rational economic employee model is McGregor's (1960) Theory X which assumes that employees are generally lazy and dislike work. In other words, most workers are irresponsible, lack ambition, and prefer job security more than anything else. Because Theory X management style employees inherently dislike work, the only way to achieve desired goals is through extrinsic rewards, namely money and promotions. A Theory X manager believes that it is his or her job to structure the organization's work in such a way as to energize the employee into believing that management will adopt a more authoritarian style of management based on the threat of punishment. However, McGregor argued that this authoritarian style will not work when the workers' needs are usually social and self-centered.

One problem with the rational economic model is that employees are viewed as machines that are made efficient by removing unnecessary or wasted effort, an approach that ignores the needs of human nature. In other words, personal needs and interpersonal difficulties are introduced by making jobs so efficient that workers have no time to relax. As a result, employees work harder but become dissatisfied with the work environment (Freedman, 1992). Finally, empirical evidence has revealed that the assumptions of

Theory X are not valid but rather that a different series of notions regarding human behavior appear to be more valid. Because Theory X depends on invalid and wrong assumptions, the model does not work properly to affect employees' job outcomes. For that reason, McGregor developed Theory Y (Halepota, 2005). According to Freedman, the practical problems caused by this model led to its replacement by the human relations school of management.

The Social Employee

Whereas the rational economic employee model assumes that workers are rational in their actions and motivations and attempt to increase their economic gains, the social employee model focuses on noneconomic needs on the job and being motivated through satisfaction of these needs. Therefore, the human relations school of management attempted to determine in their studies which noneconomic factors at the workplace would have an impact on workers (Gale, 1997). The most famous was the Hawthorne studies conducted by Roethlisberger, William Dickson, and Elton Mayo in the 1920s that showed how work groups provide interactive support and effective resistance for management's plan to increase output. In general, these studies found that employees did not respond to classical motivational approaches as occurred in Scientific Management. Rather, employees were also interested in the rewards and punishment of their own work group. The results of the studies indicated that researchers tended to feel that they were dealing with social factors that could not be explained by the classical theory (Bradney, 1995).

In sum, the social employee model assumes that employees are motivated primarily by social needs, such as the need for friendship and acceptance, and their sense of identity is shaped primarily through relationships with other individuals at work. According to this model, employees are more responsive to the pressures of their friends at work rather than to management controls and incentives. The general notion is that employees respond to management only to the extent that the supervisor can fulfill social needs for belonging, acceptance and sense of identity (Mayo, 1975). In responding to the problem, the social employee model would first deal with the organization's intrinsic relationships with workers. Thus, a negative job outcome may indicate low morale and low job satisfaction caused by weak personal relationships with supervisors or peer group pressure to retain jobs (Holland, 1989).

The Self-actualizing Employee

The self-actualizing employee model (sometimes referred to as organizational humanism or applied behavioral science) assumes that people have different needs at different times, and these needs can be classified into a system of priorities. In this model by establishing relations to the whole is believed to enable the employee to grow as an individual and develop his or her full potential (Holland, 1989). Organizational humanism is an evaluation from the human relations approach and a reaction to various aspects of human relations that was developed by a group of organizational theorists. The basis underlying organizational humanism is that individuals need to use all of their capacities and creative skills at work as well as at home. According to Milakovich and Gordon (2001), this approach assumed that work held an intrinsic interest that would

serve to motivate the employee to perform well. Organizational humanism was mainly expressed in the works of Abraham Maslow (1943), Frederick Herzberg (1959), and Clayton Alderfer (1972).

Perhaps the most popular account of job satisfaction involves fulfilling the individual's needs (Gruneberg, 1979). Maslow's (1943) Hierarchy of Needs Theory is one of the first needs theories developed in which Maslow theorized that all individuals have five types of needs that are activated in a hierarchical manner: (a) basic psychological needs, (b) safety and security needs, (c) social needs, (d) esteem needs, and (e) self-actualization needs. According to the theory, the first three are lower order needs and the fourth and fifth are higher order needs. Maslow argued that the needs are aroused in a specific order from lowest to highest, and only after the lower order needs are satisfied will an individual be capable of becoming concerned with fulfilling the higher order needs. In a job situation, the theory would predict that only after the lower order needs for security and pay have been satisfied will the employee seek satisfaction and achievement in the work itself. Maslow's theory, however, has not received strong support due to some major drawbacks. For example, many researchers failed to confirm that there are only five basic categories of need that are activated in the exact order identified by Maslow. In addition, there are always psychical needs to be satisfied (Greenberg & Baron, 2003).

The ERG theory is an alternative to Maslow's hierarchy of needs in which Alderfer (1972) suggested that needs could be classified into three rather than five categories: (a) existence, (b) relatedness, and (c) growth. Existence needs are similar to

Maslow's physiological and safety need categories whereby organizations can satisfy these needs through pay, fringe benefits, better working conditions, and job security (Weis et al., 1967). Comparable to Maslow's aspects of social needs, relatedness needs involve interpersonal relationships that can be satisfied through emotional support, respect, belonging, and recognition (Weis et al., 1967). Finally, growth needs are related to Maslow's esteem and self-actualization needs whereas the job can satisfy an individual's growth needs if it contains creativity. According to Alderfer, the ERG theory differs from Maslow's hierarchy of needs in that it does not suggest that lower level needs must be completely satisfied before upper level needs become motivational. Although Maslow did not develop his needs theory to explain job satisfaction, there is evidence that the theory is able to account for findings related to occupational level and job satisfaction. For example, employees in lower level occupations or job positions are more likely to be motivated by lower order needs such as pay and security, while employees who have basic needs fulfilled in higher level occupations or job positions are more interested in fulfilling higher order needs (Gruneberg, 1979).

Related to Maslow's needs hierarchy theory is Herzberg's (1959) well-known 2-factor or motivator-hygiene theory of job satisfaction. According to Herzberg, there are two classes of factors involved in job satisfaction. The first group, namely motivators, are factors in the working environment which, if present, will produce satisfaction; however, their absence does not produce dissatisfaction. Similar to Maslow's self actualization and Alderfer's growth needs, motivators are internal to the work itself and include factors such as achievement, recognition, growth possibility, advancement, responsibility, and an

intrinsic interest in the work itself. These higher order factors are separate and distinct from the second group referred to as hygiene factors. The absence of hygiene factors will produce job dissatisfaction, but the presence of these factors does not lead to job satisfaction. Hygiene factors represent external tasks of a particular job and include features of the work environment such as organizational policy and administration, supervision, pay, status, job security, and working conditions that are also similar to Maslow's lower order needs (e.g., psychological, safety, and social needs). Thus, Herzberg (1959) separated the satisfiers from the disssatisfiers and found the satisfiers to be intrinsic and the dissatisfiers to be extrinsic in their jobs.

Scholars have criticized Herzberg's (1959) motivator-hygiene theory in terms of its methodology and over-simplification. Critics claim that the relationship between satisfaction and dissatisfaction as well as the relationship between sources of job satisfaction and dissatisfaction is too simplistic (Greenberg & Baron 2003). For example, Herzberg's did not indicate whether there is a possibility that individuals gain satisfaction from hygiene factors. Another important concern is he did not discern how motivators and hygiene factors are weighted together to give an overall assessment of job satisfaction. As mentioned earlier, Herzberg proposed that only motivators contribute to job satisfaction and hygiene contribute to dissatisfaction, but said nothing in regard to overall job satisfaction. Another criticism relates to the accuracy of data collection in that the results tend to confirm a weak form of Herzberg's theory when using the critical incident technique or method suggesting that bad motivators may not occur as critical incidents. For instance, becoming bored with one's job is not necessarily an issue that

occurs at a critical point in time but rather one that occurs from day to day. In addition, there have been consistent failures to confirm Herzberg's theory by attempting to apply other methods that have resulted in almost universal failure (Gruneberg, 1979; Smith & Cronje, 1992). While some researchers have found that job satisfaction and dissatisfaction are based on different factors, others have found that hygiene factors and motivators exercise a strong effect on both satisfaction and dissatisfaction (Landy, 1985; Machungaws & Schmitt, 1983).

The Complex Employee

The complex employee theory can be considered as a reaction to other theories regarding the nature of employee. The basic assumption is that employees' motives may not originate from only one source but may rather reflect the many facets of human personality. According to Holland (1989), motives interact and combine to produce more complex patterns of behavior. Further, Schein (1965) argued that there is always more than one motivating factor at work, and these motivating factors are not stable. Schein stated that because people's motives are highly complex, people are liable to change over time according to their situation and relationships between groups, type of work, incentives, changing feelings, and the environment. Because employees can respond differently according to their intrinsic needs, satisfaction and effectiveness are therefore dependent upon the nature of the job as well as the nature of fellow employees.

Each of these theories indicates some aspects of an employee's relationship with the organization. Many premises of these theories have been shown to be factual (Holland, 1989) as discussed in the following research studies.

Job Satisfaction and Organizational Commitment

Job satisfaction and organizational commitment have received a great deal of importance in research studies. According to Testa (2001), although satisfaction and commitment are very popular topics in the study of work-related attitudes, there is contradiction in terms of causal relationships. The majority of theoretical and empirical evidence propose that job satisfaction is an antecedent to organizational commitment (Brown & Peterson, 1993; Buchanan, 1974; DeCottis & Summers, 1987; Harrison & Russell, 1998; Reichers, 1985; Vandenberg & Lance, 1992; Yousef, 2001); however, Bateman and Strasser (1984) suggested that the reverse causal ordering may be true. Another position considers the relationship as being reciprocal (Lance, 1991; Price & Mueller, 1981). In addition, Curry et al. (1986) and Koslowsky, Caspy, and Lazar (1991) found no evidence that job satisfaction is either an antecedent or an outcome of organizational commitment. Therefore, the relationship between job satisfaction and organizational commitment appears to be extremely complex (Billingsley & Cross, 1992; Farkas & Tetrick, 1989; Meyer & Allen, 1997).

Out of the above positions taken, the one most widely accepted among researchers is that job satisfaction is an antecedent of organizational commitment (Mowday et al., 1982; Vanderberg & Lance, 1992). Perhaps the most prominent argument favoring this causal order is based on Mowday et al.'s statements suggesting that job satisfaction and organizational commitment are related but have different constructs. For example, Mowday et al. argued that commitment is different from the construct of job satisfaction as an attitude. While organizational commitment is more

global and reflects a general affective reaction to the organization as a whole, job satisfaction reflects a response to either one's job or to job facets. As a result, organizational commitment addresses attachment to the organization whereas job satisfaction addresses the specific task environment where an employee carries out his or her work responsibilities. Further, Mowday et al. claimed that over time organizational commitment indicates more stability than job satisfaction. Even if typical daily work events influence the employee's job satisfaction level, these temporary events may not cause an employee to seriously reevaluate his or her attachment to the overall organization which is consistent with Porter et al.'s (1974) conceptual distinction between organizational commitment and job satisfaction. According to Porter and colleagues, commitment attitudes appear to develop slowly yet consistently over time as employees reflect on the relationship between themselves and their employing organization. In contrast to this development, job satisfaction appears to be a less stable measure over time, reflecting more immediate reactions to specific tangible job facets such as pay and supervision. Thus, Porter et al. suggested that the greater instability and the quicker formation of satisfaction indicate that satisfaction is an antecedent rather than an outcome of organizational commitment. The findings of Cohen (1993) and Shore and Martin (1989) also supported this approach. For example, Cohen pointed out that the relationship between job satisfaction and work outcomes relates to more immediate effects of work, but the relationship between organizational commitment and outcomes relates to effects that occur outside the workplace. Further support for the job satisfaction-organizational commitment relationship comes from Steers (1977) who

investigated the antecedents of organizational commitment. As mentioned earlier, Steers divided the antecedents of organizational commitment into three categories. Although Steers did not explicitly mention job satisfaction as being an antecedent of organizational commitment, he did propose that job satisfaction most likely would affect organizational commitment more than job characteristics.

Bateman and Strasser (1984) who supported the job satisfaction-organizational commitment causal relationship (as opposed to OC-JS) failed to correct their structural parameter estimates for measurement error. In addition, the main basis for developing causal priorities between job satisfaction and organizational commitment in Bateman and Strasser's (1984) research as well as in others was the presence of a significant "cross-lagged effect" (Vanderberg & Lance, 1992). In a same vein, Rogosa (1980) pointed out critical limitations to cross-lagged correlation designs for identifying causal priority among variables by suggesting that that this design "be set aside as a dead end" (p. 257).

Notably, as opposed to the organizational commitment-job satisfaction (OC-JS) causal relation, no research on the job satisfaction-organizational commitment (JS-OC) causal relation has addressed bias in structural parameters introduced by the measured variable problems. Based on all of the above justifications, job satisfaction in my study was considered as an antecedent of organizational commitment (Vanderberg & Lance, 1992).

Facets of Job Satisfaction and Organizational Commitment

Extant research provides empirical evidence for the relationship between the facets of job satisfaction and various components of organizational commitment. In a

meta-analytic study conducted by Meyer, Stanley, Herscovitch, and Topolnytsky (2002), they assessed the relationship between facets of job satisfaction and affective, continuance, and normative commitment. An examination of the relationships between job satisfaction and its facets as well as organizational commitment and its forms indicated that the relationships were significant to the affective commitment in particular. Meyer et al.'s results revealed that overall job satisfaction, extrinsic job satisfaction, and intrinsic job satisfaction had strong correlations with affective commitment, continuance commitment, and normative commitment.

Yew (2008) also investigated the relationship between job satisfaction and organizational commitment in Malaysia, a non-Western country. Organizational commitment, the dependent variable, was measured using Meyer and Allen's (1993) revised organizational commitment scales or the affective, continuance, and normative commitment scales. Job satisfaction was measured using the Job Descriptive Index (JDI) designed to measure five facets of job satisfaction, namely, pay, promotion, supervision, and coworkers (extrinsic job satisfaction) and the work itself (intrinsic job satisfaction). Finally, hierarchical regression was used to analyze data. In general, Yew confirmed that satisfied employees were more committed to their organization. More specifically, all facets of job satisfaction had a significant positive relationship with affective commitment. When continuance commitment was entered into the model, however, all facets of job satisfaction did not indicate a significant relationship with continuance commitment. Finally, when normative commitment was entered into the model as a

dependent variable, supervision was the only extrinsic job satisfaction facet that revealed a significant relationship with normative commitment.

Huang's (2004) research determined the relationship between job satisfaction and organizational commitment by including intrinsic and extrinsic job satisfaction as independent variables and Meyer and Allen's (1993) affective, continuance, and normative commitment as dependent variables. The variables that were important in predicting the level of affective commitment by faculty members included their levels of satisfaction with extrinsic factors and intrinsic factors. The variable that was significant in predicting level of continuance commitment by faculty members was their level of satisfaction with intrinsic factors. Finally, the variables that were significant in predicting level of normative commitment by faculty members included their levels of satisfaction with intrinsic and extrinsic factors. In other words, while intrinsic and extrinsic job satisfaction were significantly related to affective and normative commitment, the only variable that was significantly related to intrinsic job satisfaction by faculty members was continuance commitment.

In another study, Clugston (2000) used structural equation modeling to estimate the relationship between job satisfaction and affective, continuance, and normative commitment among a sample selected from a government organization responsible for administration issues. As expected, job satisfaction had a positive impact on affective and normative commitment. Contrary to Clugston's hypothesis, however, job satisfaction also had a positive relationship to continuance commitment. Initially, job satisfaction was proposed to have a negative influence on continuance commitment because Clugston

assumed that it would be an affective response to work and that affective and continuance commitment would be inversely related. According to Clugston, the positive effect of job satisfaction on continuance commitment may have been due to the composite nature of the scale that contained items which drew on an individual's satisfaction with their pay. Because the subjects were asked in some of the continuance commitment scales if it would be too costly to leave their current organization or if they believed that another organization could not match their overall benefits, a measure of job satisfaction including satisfaction with pay may likely have resulted in a positive effect on continuance commitment.

Irving, Coleman, and Cooper (1997) provided further support to Clugston's (2000) research by finding a significant relationship between job satisfaction and the 3-components of organizational commitment. They assessed the factor structure of Meyer, Allen, and Smith's (1993) measure of commitment based on responses from 232 employees within a single organization who worked in a variety of occupations. Confirmatory factor analysis suggested that three forms of commitment are distinguishable (e.g., affective, normative, continuance) across occupations. Consistent with previous research conducted by Meyer et al. (1993), Irving et al.'s study revealed that job satisfaction was positively correlated with affective and normative commitment. Although both relationships were positive and significant, the correlation between job satisfaction and affective commitment was significantly larger than the correlation between job satisfaction and normative commitment. Unlike Meyer et al., however,

Irving et al. did not find a significant relationship between job satisfaction and continuance commitment.

Similarly, Yousef (2002) examined the correlation between job satisfaction and components of organizational commitment in the United Arab Emirates by using path analysis to investigate the direct and indirect effects of antecedents on affective, continuance, and normative commitment. Path analysis results revealed that job satisfaction directly and positively impacted affective and normative commitment but negatively impacted continuance commitment thus indicating that employees who are pleased with their jobs will be more willing to remain in the organization. Likewise, employees who are willing to remain with the organization may not necessarily want to but rather they have to either due to the high costs involved in leaving or due to the lack of alternative job opportunities.

In more recent research, Liu and Norcio (2008) investigated the mediating effects of job characteristics on job satisfaction and organizational commitment by Taiwanese expatriates in mainland China. Through a snowballing sampling plan, the entire accessible population of 6,156 was invited to participate in an on-line web survey. Their first model focused on the relationships between intrinsic and extrinsic job satisfaction and affective commitment, while the second model examined the effects of two job satisfaction variables on affective commitment after entering the job characteristics variable. Finally, their third model focused on all interactions between the two job satisfaction variables, job characteristics, and curvilinear relationships between predictors and affective commitment. According to the results, a combination of three predictors

was able to significantly predict affective commitment. In addition, the significance level of intrinsic and extrinsic job satisfaction on affective commitment did not change significantly after adding job characteristics to the model. In the three regression models, intrinsic job satisfaction had a significant impact on affective commitment; however, extrinsic job satisfaction was not shown to have any impact on affective commitment. Moreover, all of the interactions between both intrinsic and extrinsic job satisfaction and job characteristics were found to be significant indicating that job characteristics mediated the impact of intrinsic job satisfaction and extrinsic job satisfaction on affective commitment.

After Liu and Norcio (2008) repeated the same procedure to determine normative commitment, the results indicated that intrinsic and extrinsic job satisfaction had a significant impact. For the interactions between both types of job satisfaction and job characteristics, the mediating effect of job characteristics on intrinsic and extrinsic job satisfaction and normative commitment was also identified. Besides the mediating effect, job characteristics also had a direct positive effect on normative commitment and both job satisfaction variables.

Finally, continuance commitment was not positively and significantly predicted by intrinsic and extrinsic job satisfaction. Findings also indicated that job characteristics were unable to significantly mediate the impact of intrinsic and extrinsic job satisfaction on continuance commitment. In sum, Liu and Norcio (2008) found that intrinsic job satisfaction was significantly related to affective commitment; however, extrinsic job satisfaction did not have a significant effect. Both intrinsic and extrinsic job satisfaction

were positively and significantly related to normative commitment, but no significant relationship was found between job satisfaction and continuance commitment.

Overall job satisfaction has also been hypothesized to mediate the relationship between the five job characteristics and three components of organizational commitment based on the position that the relationship between job satisfaction and organizational commitment appears to to be extremely complex (Billingsley & Cross, 1992; Farkas & Tetrick, 1989; Meyer & Allen, 1997). According to this point of view, the rationale for the absence of a job satisfaction-organizational commitment causal relationship is that job satisfaction and organizational commitment are correlated due to the effects of common causal variables such as job characteristics (James & James, 1989; Lance, 1991).

H_{16}. Intrinsic, extrinsic, and overall job satisfaction are positively related to affective and normative commitment but negatively related to continuance commitment.

H_{17}. Overall job satisfaction will mediate the relationship between the job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and each component of organizational commitment (affective, continuance, and normative).

Supervisory and Nonsupervisory Positions

In TNP, both first level and mid-level police supervisors occupy supervisory positions. Whereas police officers who graduate from police training schools do not receive promotions, first level and mid-level supervisors who graduate from the police academy may have already been promoted by this time. There have been no known

studies conducted in the TNP that have examined the differences between supervisory and nonsupervisory positions in regard to levels of affective, continuance, and normative commitment. In addition, previous organizational commitment research has indicated mixed results regarding the levels of organizational commitment between supervisory and nonsupervisory positions. For example, Luthans, McCaul, and Dodd (1985) did not find any significant differences in the levels of organizational commitment between supervisory and nonsupervisory employees, a finding that surprised the researchers given that supervisory employees were assumed to exhibit more commitment to their organization than nonsupervisory employees due to their higher level of rank.

Using a sample of Australian police officers and police supervisors, Savery, Soutar, and Weaver (1991) examined the differences between their organizational commitment levels and found that officers with the rank of sergeant had significantly lower levels of organizational commitment than lower ranking officers. In contrast to Savery et al.'s, research, however, Sneed and Herman (1990) found supervisors to have higher commitment scores than did nonsupervisory employees.

H_{18}. There is a significant difference between first and mid-level supervisors and police officers in regard to affective, continuance, and normative, commitment.

Figure 2 illustrates a summary of possible direct and indirect relationships between independent and dependent variables as well as the direction of these relationships. In reviewing the chart, the reader should note the following:

1. (+) and (-) represent positive and negative relationships, respectively.
2. White arrows indicate direct relationships between variables

3. Gray arrows indicate indirect relationships between variables
4. The failure to note a relationship between a variable and one or more component(s) of organizational commitment indicates that no relationship is expected or that relations are not expected to be significant.

AC = Affective Commitment

NC = Normative Commitment

CC = Continuance Commitment

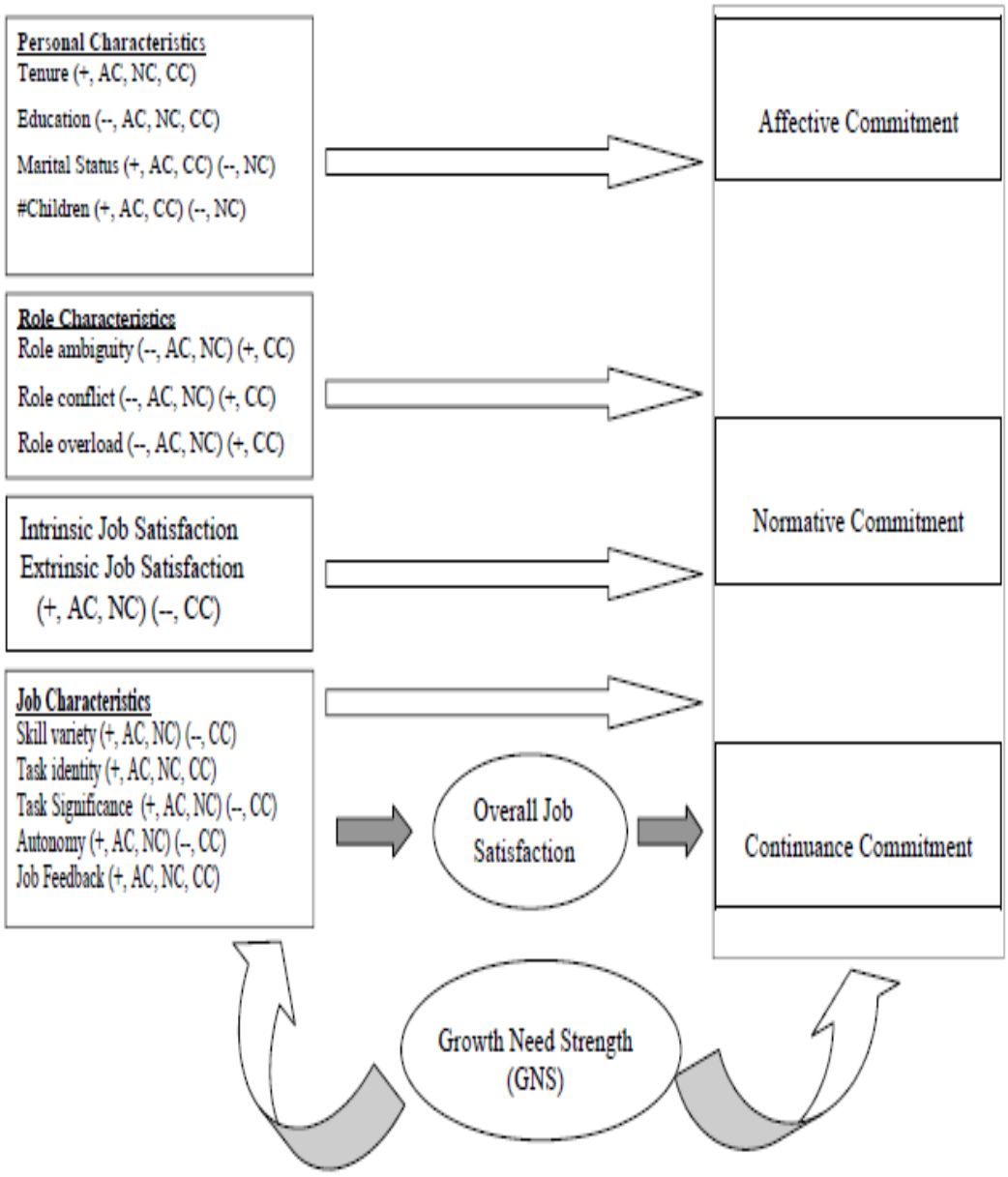

Figure 2. Summary of the relationships between variables.

CHAPTER III

METHODOLOGY

The relationship between organizational commitment (affective, continuance, and normative) and four categories of antecedents (personal characteristics, job characteristics, role characteristics, and job satisfaction) that were examined in my study are presented in this chapter. In addition, the methodological procedures that were employed are also outlined by first restating the research questions and hypotheses followed by a detailed description of the research design and method, population and sample, instrumentation, measurement, reliability and validity of measurements, data collection strategy, and data analyses procedures. Finally, VCU's Institutional Review Board (IRB) process is explained.

Research Questions

1. To what extent are selected personal characteristics (i.e., tenure, education, number of children, and marital status) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?
2. To what extent are job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?
3. To what extent is the Motivating Potential Score (MPS) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

4. Does the Growth Need Strength (GNS) moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

5. To what extent are role related characteristics (role ambiguity, role conflict, and role overload) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

6. To what extent is each job satisfaction facet (overall, intrinsic, extrinsic) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

7. Does overall job satisfaction mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

8. Is there a significant difference between first and mid-level supervisors and police officers who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

9. Is there a significant difference between females and males who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

Hypotheses

To determine the relationship between four research variables and three components of organizational commitment, 18 hypotheses resulted (see Table 4).

Table 4. Hypotheses

H_1. Tenure is positively related to each component of organizational commitment (affective, continuance, and normative).
H_2. Education is negatively related to each component of organizational commitment (affective, continuance, and normative).
H_3. There is a significant difference between females and males in regard to affective, continuance, and normative commitment.
H_4. Marital status is positively related to affective and continuance commitment but negatively related to normative commitment.
H_5. Number of children is positively related to affective and continuance commitment but negatively related to normative commitment.
H_6. Skill variety is positively related to affective and normative commitment but negatively related to continuance commitment.
H_7. Job Feedback is positively related to each component of organizational commitment (affective, continuance, and normative).
H_8. Autonomy is positively related to affective and normative commitment but negatively related to continuance commitment.
H_9. Task identity is positively related to each component of organizational commitment (affective, continuance, and normative).
H_{10}. Task significance is positively related to affective and normative commitment but negatively related to continuance commitment.
H_{11}. Motivating Potential Score (MPS) is positively related to each component of organizational commitment (affective, continuance, and normative commitment).
H_{12}. Growth Need Strength (GNS) will moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and feedback) and each component of organizational commitment (affective, continuance, and normative).
H_{13}. Role ambiguity is negatively related to affective and normative commitment but positively related to continuance commitment.
H_{14}. Role conflict is negatively related to affective and normative commitment but positively related to continuance commitment.
H_{15}. Role overload is negatively related to affective and normative commitment but positively related to continuance commitment.
H_{16}. Intrinsic, extrinsic, and overall job satisfaction are positively related to affective and normative commitment but negatively related to continuance commitment.
H_{17}. Overall job satisfaction will mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and each component of organizational commitment (affective, continuance, and normative).
H_{18}. There is a significant difference between first and mid-level supervisors and police officers in regard to affective, continuance, and normative commitment.

Research Design and Method

My study was a cross-sectional and nonexperimental design in which information was elicited from police officers, first level and mid-level police supervisors of the Turkish National Police (TNP). Cross-sectional designs are perhaps the most predominant ones used in the social sciences (Nachmias & Nachmias, 2000) to gather data regarding attitudes and behaviors of employees. According to O'Sullivan, Rassel, and Berner (2003), the key future of the cross-sectional design is that data represent a set of people or other cases at one point in time. Because I did not measure the change in value of variables over time and examine the causal relationship, the cross-sectional design was an appropriate tool for my study. In general, the advantages of conducting a cross-sectional study are: (a) it saves time, (b) it saves costs, (c) all things equal, response rates are generally high, and (d) results can be published in time for agencies to make policy changes (Breakwell, Hammond, & Fife-Schaw, 1997).

Cross-sectional designs are particularly suited for studies that involve collecting data on many variables taken from a large group of subjects and from subjects who are geographically dispersed. O'Sullivan et al. (2003) argued that any of these conditions are sufficient for using a cross-sectional design. In my study, more than 20 individual variables were used as independent and dependent variables, and a large group of first-level and mid-level ranking police supervisors as well as nonranking police officers of the TNP were used to collect data. During the time of my study, the entire population of national police officers and police supervisors across Turkey was estimated to be approximately 193,840 (Department of Personnel, 2009). One further justification for

using the cross-sectional design was because the large number police officers perform their duties in 81 cities that are geographically dispersed over a 780,580 square kilometer (301,384 sq. mile) land area of which 756,816 are in Asia and 23,764 are in Europe (Turk Online, 2009).

Quantitative research was the method that I used to administer a survey only one time to a given sample. Quantitative research involves numerous variables that are measured in a predetermined and specific way in which the data are numeric and can thus be summarized numerically. Given that an important objective of the quantitative research method is to compare cases on different variables, factors unique to individual cases are often not included and information regarding context is frequently ignored (O'Sullivan et al., 2003). Therefore, the reasons that I used the quantitative rather than the qualitative method were due to efficiency, cost, and the ability to make inferences of a large population by utilizing a relatively small sample population (Creswell, 2003). More specifically, the quantitative research method allowed me to make inferences related to all police officers and police supervisors of the TNP using a smaller representative sample of the entire population.

Population and Sample

According to O'Sullivan et al. (2003), a population represents the total set of units that a researcher is interested in or, in other words, the larger set from which the sample is drawn. As of 2009, the total population of the entire force of sworn police officers and police supervisors employed by the TNP was 193,840 spread throughout 81 cities in Turkey (Department of Personnel, 2009). For the purpose of my study, however, the

target population totaled 60,193 subjects comprised of 55,885 police officers, 2,624 first level supervisors, and 1,684 mid-level supervisors employed in four cities of Turkey (e.g., Ankara, Istanbul, Malatya, and Diyarbakir) as shown in Table 5.

Table 5. Target Population Distributed by City

City	Mid-level Supervisors	1st Level Supervisors	Police Officers	TOTAL
Ankara	947	1,435	19,119	21,501
Istanbul	519	976	30,826	32,321
Malatya	88	74	1,931	2,093
Diyarbakir	130	139	4,009	4,278
TOTAL	1,684	2,624	55,885	60,193

Samples were selected from mid-level supervisors, first level supervisors, and police officers within Turkey's various city police departments. Mid-level supervisors included superintendents and third class and fourth class superintendents followed by first level supervisors comprised of captains, lieutenants, and sergeants. Finally, the lower level represented nonranking police officers (constables) who have no chance by any means for promotion. The senior command staff (e.g., 2nd class chief superintendent, 1st class chief superintendent) were excluded from my study because they belong to a high management level responsible for policy making; therefore, their responses might not have been comparable to other junior officers. Further, they made up only .0086% of the total population which would not affect my survey sample. Civilian officers who provide supportive duty were also excluded because they were not the focus of my study.

A probability sampling method was used to ensure that subgroups within the study's population were adequately represented in the sample. With a probability sample, each unit in the population had some chance of being included the sample. According to O'Sullivan et al. (2003), that chance is greater than zero and can be calculated. Nachmias and Nachmias (2000) further stated that a well-designed sample ensures that if a study was to be repeated on a number of different samples taken from the same population, the results provided from each sample would not differ from the population parameters by more than a specified amount. Thus, a probability sampling design makes it possible for researchers to estimate the degree to which the findings based on one sample are likely to differ from those obtained by studying the entire population. If sample statistics are to be used to accurately estimate population characteristics, probability samples are therefore required (O'Sullivan et al., 2003).

More specifically, to reach police officers and first level and mid-level supervisors, I first used cluster sampling. In the first stage, four Turkish cities were selected (Ankara, Istanbul, Malatya, and Diyarbakir) based on their population and geographical locations. For example, Ankara and Istanbul are among the most populous cities in Turkey, and Malatya and Diyarbakir were selected based on the working regions of police officers. The Ankara and Istanbul police departments included a 53,822 police officers and police supervisors who represented approximately 30% of all police across the country. Located in the eastern region of Turkey, Diyarbakir and Malatya were selected due to their geographic location as depicted in Appendix C. In contrast to Ankara and Istanbul, both cities are located in different working region.

In terms of working location, cities in Turkey are classified and labeled as Region 1 (western) and Region 2 (eastern) according to their security, public order, economic, social, cultural, and transportation resources and situations. While the length of service for police officers and supervisors is between 6 to 10 years in Region 1, it is between two to four years for cities located in Region 2. According to the appointment regulation, each police officer must work at least once in one of the cities located in Region 2. On the other hand, the regulation stipulates that police supervisors can be deployed more than once in one of Region 2's eastern cities since the number of ranking officers are smaller when compared to nonranking officers (Appointment Regulations, 1992). Notably, the appointment regulation for TNP members results in a constant workforce rotation from Region 1 to Region 2, from Region 2 to Region 1, or from Region 1 to Region 1 (e.g., Ankara to Istanbul where both are located). However, as Durmaz (2007) emphasized, locations selected to administer a survey to TNP members are not critical given that police officers or supervisors might have been recently appointed to these cities from other locations. Durmaz assumed that since rotation is required, TNP members are unlikely to exhibit different thoughts and attitudes toward organizational outcomes.

In the second stage of the sampling procedure, I contacted the head of the personnel department or communications department to request a list of e-mail addresses of police and supervisory personnel who worked in the Ankara, Istanbul, Malatya, and Diyarbakir city police departments. Although there are more than 20 divisions or departments in TNP, they generally fall into seven main categories: (a) judicial and preventive units, (b) human resources, (c) logistics units, (d) international affairs, (e)

traffic units, (f) internal investigation and (g) consultation units (General Directorate of Security, 2009). When the list was officially obtained from the authorities, respondents were randomly selected. By using simple random sampling as well as cluster sampling, this provided an equal probability of selection to ensure that subgroups within the population were adequately represented in the sample

Another issue in relation to the sampling procedure was to determine the sample size in which larger samples were more likely to provide better estimates of population parameters. On the other hand, additional units brought additional expenses and increased the size of a sample beyond a certain point that resulted in very little improvement to generalize the population. According to O'Sullivan et al. (2003), when choosing a sample size, the researcher must balance the need for accuracy against the need to keep costs at a reasonable level. Referring back to Table 5, my total target population was 60,193 (Ankara, 21,501; Istanbul, 32,321; Malatya, 2,093; Diyarbakir, 4,278). According to Salant and Dillman (1994) and Isaac and Michael (1995), it was necessary for me to obtain a sample of 377 subjects from Ankara, 379 from Istanbul, 322 from Malatya, and 351 from Diyarbakir (n = 1,429) in order to achieve a 95% confidence interval and a sampling error of plus or minus 5 percentage points for this population as depicted in Table 6.

Table 6. Estimated Sample Size

Ankara	Istanbul	Malatya	Diyarbakir	TOTAL
377	379	322	351	1,429

Survey Instrument

According to Nachmias and Nachmias (2000), electronic survey methods have become increasingly popular, and as the proportion of people accessible through e-mail or the Internet continues to rise, these forms of media offer a promising means for conducting surveys. Therefore, the electronic survey was the instrument that I chose to use. Bradley (1999) categorized electronic surveys into e-mail and web-based surveys in which e-mail surveys were further divided into simple e-mail, e-mail attachment, and URL embedded. In simple e-mail, survey questions are sent that also include an e-mail message that makes a reply quite easy for the researcher to receive; however, the simple text format is unattractive. Conversely, an e-mail attachment involves sending the survey questions in the form of an attachment that is included in the e-mail message. Although graphics or formats can be added to the attachment, the threat of a virus may affect the response rate. The third type of e-mail survey, URL embedded, is a method by which an e-mail request for participation also includes an URL embedded in the message. Respondents simply click on this hypertext link that then evokes their Web browser thus presenting the reader with a web-based questionnaire.

Besides e-mail surveys, three types of web-based surveys identified in the literature include: open web, closed web, and hidden web. The open web type of survey is part of a “banner invitation” that is “open” to any visitor or, in other words, there is no control over who visits the website. In the second type, participants are invited to visit the site and respond to questions in a “closed” survey that may perhaps require a password. Finally, the “hidden” web can only be seen once a visitor triggers a mechanism, namely a

date or visitor number when surfing specific pages (e.g., pop-up survey) (Wang & Doong, 2007).

According to Smee and Brennan (2000), the rapid growth of the Internet and Web has opened up an electronic forum to researchers who are attracted by the potential for large survey sample sizes, faster responses, less data processing, and lower costs when compared to mail and telephone surveys. For example, information and messages sent via e-mail can reach their destination in minutes rather than days such as may be the case with conventional mail delivery, and users can send large files at a reasonable cost (Nachmias & Nachmias, 2000). The method is also inexpensive since it eliminates the cost of postage, printing, and interviews. In other words, interviewers do not have to be hired or trained, no postage or printing bills must be paid, and no one has to enter data from paper questionnaires (Schaefer & Dillman, 1998).

Other advantages of electronic surveys have been reported by Smee and Brennan (2000) who found that the highest response rate (61%) in their study was produced by a single page web-based survey, followed by the mail survey and two multistage web surveys that produced similar response rates (40% to 50%). However, the e-mail survey produced a very low response rate (12%) calling into question the reliability of the data provided. Smee and Brennan also reported that electronic-based surveys resulted in faster response times than the mail survey. For example, while mail surveys took nine days for responses from the first contact to level out, only two days were taken for the e-mail and single page web surveys and three to five days for either validated or nonvalidated multiple page questionnaires. Schaefer and Dillman (1998) supported Smee and

Brennan`s findings by arguing that over 50% of all completed e-mail questionnaires were received before the first completed paper questionnaire was ever returned. According to Smee and Brennan, the response speed was between 9.79 and 21 days in mail surveys whereas the period of time in electronic surveys was only between 2.5 to 9.6 days. Such significant differences among studies may stem from the variation in research designs, survey populations, type and length of the instrument, and number of contacts (Dillman, Tortora, & Bowker, 1998). However, one consistent finding was that an electronic survey is returned more quickly than any other survey method used (Taylor, 2000).

The survey instruments used in my study were derived from the organizational commitment and job satisfaction literature. To increase reliability and validity, instruments were adapted from Hackman and Oldham (1980), Meyer et al. (1997), Rizzo et al. (1970), Spector and Jex (1998), and Weiss et al. (1967) rather than developing new ones. The level of measurement and scales for the instruments are discussed in detailed in the subsequent section.

Measurement of the Dependent Variables

Initially, Meyer and Allen (1991) developed a 3-component model of organizational commitment in which the measures were revised in response to various research findings (Allen & Meyer, 1996; Meyer et al., 1993; Meyer & Allen, 1997). In my study, organizational commitment was measured by using the revised organizational commitment scales (Meyer & Allen, 1997) consisting of 6 affective commitment (AC) items, 7 continuance commitment (CC) items, and 6 normative commitment (NC) items (see Appendix D). Responses were based on a 7-point Likert type scale where 1 =

strongly disagree, 2 = disagree, 3 = slightly disagree, 4 = neither agree nor disagree, 5 = slightly agree, 6 = agree; and 7 = strongly agree. Likert scales are the most common questionnaire designs used to measure an individual's opinions or attitudes. According to O'Sullivan et al. (2003), a Likert type index represents an ordinal level of measurement.

According to Meyer and Allen (1997), their 1991 scales that were originally designed to measure three components of organizational commitment have not only generated the most empirical research pertaining to organizational commitment but have also been subject to the greatest amount of scrutiny. Although Porter et al.'s (1974) commitment scales dominated research until the mid-1980s, they were criticized due to the overlapping problem between the two dimensions of their organizational commitment questionnaire (OCQ). Critics argued that there was an overlap between some items and constructs on the scale that were considered to be outcomes of commitment. Because of this conceptual and methodological overlap, researchers relied on the revised version of Meyer and Allen (1997). Later, the overlap problem resulted in the abandonment of OCQ (Cohen, 2007). According to Cohen, the current favorite contender is Meyer and Allen's (1997) 3-component model of organizational commitment scales.

Affective Commitment Scale (ACS)

The affective commitment scale measures organizational commitment in which Meyer and Allen (1997) defined affective commitment as the employee's attachment to, identification with, and involvement in the organization. The following statements included in the organizational commitment scale were formed by Meyer and Allen to

measure affective commitment. The "R" in brackets indicates a reverse key item or, in other words, scoring was reversed.

1. I would be very happy to spend the rest of my career in this organization.
2. I really feel as if this organization's problems are my own.
3. I do not feel like "part of the family" at my organization. [R]
4. I do not feel "emotionally attached" to this organization. [R]
5. This organization has a great deal of personal meaning for me.
6. I do not feel a strong sense of belonging to my organization. [R]

Reliability and Validity

Using the coefficient alpha, Meyer and Allen (1997) estimated the internal consistency of the number of scales obtained for the affective commitment scale to be more than 40. Among the three commitment components (affective, continuance, and normative), the median reliability was the highest (0.85) for the ACS. In their study, they focused on 40 employees who represented more than 16,000 participants drawn from a wide variety of organizations and occupations (Allen & Meyer, 1996). In terms of validity, Allen and Meyer (1990) reported that the canonical correlation of the 3-component scales demonstrated both discriminant and convergent validity for the ACS; therefore, the three components were found to be conceptually and empirically distinct.

The validity and reliability for the ACS have also been supported by other researchers (Blau, Paul & St, John, 1993; Clugston, 2000; Irving et al., 1997; Shore & Tetrick, 1991). For example, the reliability estimate for the ACS was reported to be .85 by Clugston and .84 by Irving et al., whereas Blau et al. (1993) revealed that ACS had a

test-retest reliability of .94 over a 7-week period for respondents who had a minimum length of five years of service. In addition, Shore and Tetric's study revealed that the ACS had a coefficient alpha of .90.

Continuance Commitment Scale (CCS)

The continuance commitment scale measures organizational commitment that refers to an awareness of the costs associated with leaving the organization. The following questions were designed by Meyer & Allen (1997) to measure continuance commitment.

1. It would be very hard for me to leave my organization right now even if I wanted to.
2. Too much of my life would be disrupted if I decided I wanted to leave my organization right now.
3. Right now, staying with my organization is a matter of necessity as much as desire.
4. I believe that I have too few options to consider leaving this organization
5. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.
6. One of the major reasons I continue to work for this organization is that leaving would require a considerable personal sacrifice; another organization may not match the overall benefits I have here.
7. If I had not already put so much of myself into this organization, I might consider working elsewhere.

Reliability and Validity

Using coefficient alpha, Meyer and Allen (1997) found reliability for the continuance commitment scale to be .79. More recently, Tayyab (2007) examined the affective, continuance, and normative commitment scales by conducting an exploratory factor analysis to determine the emergent factorial structure of the measures and to test the dimensionality of the organizational commitment scales. In order to establish construct validity, an emergent factor structure was established by using a confirmatory factor analysis. In addition, the internal consistency reliabilities were acceptable for all scales. For example, coefficient alpha for the CCS was higher than .70. In addition to convergent and discriminant validity and reliability as evidenced by coefficient alpha, the measures for CCS and ACS also indicated internal reliability as evidenced by split-half reliability coefficients of more than .70 which is above the recommended minimum value of .70 (Noor & Noor, 2006).

Based on the results of Allen and Meyer (1996) who found satisfactory construct validity and internal reliability, Meyer et al. (2002) conducted a further meta-analysis of the antecedents, correlates, and consequences of the 3-component model of occupational commitment. They discovered that the model appeared to be the most suitable conceptualization of organizational commitment and may indeed be applicable in other countries and cultures outside of North America. For example, Noor and Noor's (2006) study that was conducted in Malaysia provided evidence that Allen and Meyer's organizational commitment scales can also be extended to an international setting that has been used in the Turkish context and found to be valid and reliable (Durna & Eren,

2005). When Wasti (1999) translated the affective, continuance, and normative commitment scales into Turkish, the internal reliability coefficients of the commitment scales were found to be .84, .82, and. 70, respectively. Wasti's reliability analyses also indicated that alpha coefficients were .86 for ACS, .81 for CCS, and .89 for NCS. Furthermore, Meyer and Allen's (1997) scales have been previously used with police samples and found to be reliable and valid scales (Currie & Dollery, 2006; Dunham et al., 1994; Gasic & Pagon, 2004; James et al., 1989).

Normative Commitment Scale (NCS)

The normative commitment scale measures organizational commitment that reflects a feeling of obligation to continue employment. The following statements included in the organizational commitment scale were formed by Meyer and Allen (1997) to measure normative commitment. The "R" in brackets indicates a reverse key item when scoring was reversed.

1. I do not feel any obligation to remain with my current employer. [R]
2. Even if it were to my advantage I do not feel it would be right to leave my organization now.
3. I would feel guilty if I left my organization now.
4. This organization deserves my loyalty.
5. I would not leave my organization right now because I have a sense of obligation to the people in it.
6. I owe a great deal to my organization.

Reliability and Validity

Although internal consistency for the normative commitment scale was the lowest (.73) compared to the affective and continuance scales in Meyer and Allen's (1997) research, it was still adequate for the scale's reliability. For example, the reliability for the normative commitment scale was reported as .79 in their earlier study conducted in 1991. Meyer, Irving, and Allen (1998) also reported reliability estimates of .74 and .85 after administering their normative commitment scale twice. However, Stephen (2007) argued that NCS did not indicate a high degree of discriminant validity with ACS in North American studies. While the NCS items invariably loaded on a separate factor from ACS items in confirmatory factor analysis, the NCS tended to be highly correlated with the ACS. Also, in non-Western countries, the NCS and ACS tended to be even more highly correlated; however, NCS has shown greater discriminant validity in these settings because commitment is more likely to contribute significantly to outcome predictions. In other words, there is evidence of construct distinctiveness in non-Western countries even if there are high correlations due to their collectivist nature. In Eastern cultures, however, commitment based on obligation might have more "resonance" according to Meyer and Allen (1997). In Turkey, a collectivistic society, normative commitment is highly important for predicting positive work outcomes (Wasti, 2003).

Measurement of the Independent Variables

Job Satisfaction

Job satisfaction was measured by using the short form of the Minnesota Satisfaction Questionnaire (MSQ) developed by the Minnesota Studies in Vocational Rehabilitation (see Appendix E) that encompasses a subset of the longer version consisting of 100 items. The 20-item short form is a popular measure that conceptualizes satisfaction as being related to either intrinsic or extrinsic aspects in regard to general job satisfaction (Sharp, 2008). The MSQ short form utilizes a 5-point Likert type scale for each of the 20 factors: very dissatisfied = 1, dissatisfied = 2, neutral = 3, satisfied = 4, and very satisfied = 5 (Weiss et al., 1967). As shown in Table 7, intrinsic job satisfaction represents a 12-item scale followed by the 6-item extrinsic satisfaction scale and 20-item general job satisfaction scale. Intrinsic satisfaction includes items such as “being able to keep busy all the time,” “the chance to work alone on the job,” “the chance to do things for other people,” and “the feeling of accomplishment I get from the job,” whereas extrinsic satisfaction includes items such as “the way my boss handles his/her workers,” “my pay and the amount of work I do,” and “the chances for advancement on this job” (Weiss et al., 1967).

Table 7. Facets from the Minnesota Satisfaction Questionnaire

Facets	Definitions	Scale
1. Activity	Being able to keep busy all the time	Intrinsic
2. Independence	The opportunity to work autonomously	Intrinsic
3. Variety	The opportunity to do different things	Intrinsic
4. Social status	Having respect from the community	Intrinsic
5. Supervision (human relations)	The relationship between supervisors and employees	Extrinsic
6. Supervision (technical)	The technical quality of supervision	Extrinsic
7. Moral values	The opportunity to do things that do not counter to one's judgment	Intrinsic
8. Security	The way a job provides for steady employment	Intrinsic
9. Social service	Being able to do things as a service to others	Intrinsic
10 Authority	The chance to tell people what to do	Intrinsic
11. Ability utilization	The chance to do something that makes use of abilities	Intrinsic
12. Company policies and practices	The way company policies are implemented	Extrinsic
13. Compensation	Feelings about pay in contrast to amount of work completed	Extrinsic
14. Advancement	The chances for advancement in this job	Extrinsic
15. Responsibility	The freedom to implement one's judgment	Intrinsic
16. Creativity	The opportunity to try one's own methods	Intrinsic
17. Working conditions	Psychical aspect of one's place of employment	General Satisfaction
18. Coworkers	How one gets along with coworkers	General Satisfaction
19. Recognition	Being recognized for a job well done	Extrinsic
20. Achievement	Feeling of accomplishment one gets from the job	Intrinsic
General Satisfaction	Working conditions Coworkers (+ Intrinsic Job Satisfaction) (+ Extrinsic Job Satisfaction)	

Source: Dawis et al. (1984); Weiss, Dawis, & England (1967).

The short form of the MSQ was translated into Turkish and adapted by the Department of Psychology at the University of Bosporus (Ozyurt, Hayran, & Sur, 2006).

As cited in Ozyurt et al. (2006), a validation and reliability test was conducted by Baycan (1985). Following Baycan's study, the short form has been used in other studies related to different occupations in Turkey (Ceylan & Uluturk, 2006; Eker, Eker, & Pala, 2008; Ozyurt et al., 2006; Sevimli & Iscan, 2005).

Reliability and Validity

Utilizing the MSQ short form, Spector (1997) and Weiss et al. (1967) reported acceptable internal consistency reliabilities for extrinsic, intrinsic, and general job satisfaction with each of the three scales producing consistently high reliability coefficients. For example, the intrinsic job satisfaction scale coefficients ranged from .84 to .91, the extrinsic job satisfaction scale coefficients ranged from .77 to .82, and the general job satisfaction scale indicated reliability coefficients from .87 to .92. Hirschfeld (2000) concluded that a 2-dimensional model containing both intrinsic and extrinsic job satisfaction with alpha coefficients ranging from .87 to .95 is superior to the general job satisfaction model thus confirming the internal consistency of the scale. In a study conducted by Baugh and Roberts (1994), two subscales that measured both extrinsic and intrinsic job satisfaction were also included. In their sample, the internal consistency reliability was .85 for general job satisfaction (e.g., 20 items), .88 for the intrinsic job satisfaction scale, and .76 for the extrinsic job satisfaction scale.

Studies conducted in Turkey have provided further support for the reliability of the MSQ short form. For example, Bilgic (1998) applied the short form of MSQ to the Turkish culture and reported alpha coefficients as higher than .80. More recently, Ozyurt et al.'s (2006) study revealed that the MSQ was reliable with a Cronbach alpha of .88. In

another Turkish survey conducted in the city of Bursa, Eker et al. (2008) utilized the short form of the MSQ to measure the effects of job satisfaction on organizational commitment with a population that consisted of public and private hospital health staff. After receiving a 60% response rate, the results indicated that Cronbach's coefficient alpha for general job satisfaction was .89.

Weiss et al. (1967) examined the validity of the MSQ short form instrument in terms of construct, concurrent, and content. According to Nachmias and Nachmias (2000), an instrument must display construct validity in order for the findings of measurement to be meaningful. In other words, construct validity determines if the instrument is logically and empirically tied to the concepts and theoretical assumptions employed by researchers. Evidence of Weiss et al.'s construct validity was derived primarily from the MSQ performing according to theoretical expectations.

O'Sullivan et al. (2003) defined concurrent validity as a form of operational validity established by collecting and comparing two different measures at the same time. Evidence for concurrent validity of the MSQ in Weiss et al.'s (1967) survey was derived from the differences in satisfaction among 25 occupational study groups. They determined that differences between the groups were statistically significant at the .001 level for both means and variances on all scales, thus indicating that the MSQ short form can differentiate among groups. Finally, content validity indicates that a measurement instrument covers all attributes of the concept that a researcher is trying to measure. In Weiss et al.'s study, the results of factor analysis supported content validity of the MSQ.

Job Characteristics

Hackman and Oldham (1975) developed the Job Diagnostic Survey (JDS) in order to determine the effects of job characteristics on employees. The JDS contains 8 sections and 83 items that measure the nature of job and job tasks, motivation, personality, psychological states (cognitions and feelings about job tasks), and reactions to the job. Job characteristics are categorized as high and low on five core dimensions that assess the reactions of individuals to their work and the broader setting and readiness of some individuals to take on enriched jobs. The JDS instrument contains a variety of Likert type scales depending on the section. For example, sections 1 through 5 use a 7-point scale; Section 6, a 10-point scale; and sections 7 and 8, a 5-point scale (Hackman & Oldham, 1980).

For the purposes of my study, the JDS was used to measure (a) skill variety, (b) task identity, (c) task significance, (d) autonomy, and (e) job feedback. These five job characteristics used to measure the effects on employees can be found in Section 1 and Section 2 of the JDS (see Appendix F). In section 1, a single item was provided for each job characteristic in which respondents identified how much they perceived each one to be present in their current jobs by circling the number that best reflected their assessment concerning the amount of variety in their jobs. On the other hand, two items were provided in Section 2 for each job characteristic of which one item was phrased in reversed or negative terms. Respondents were asked to indicate how accurate or inaccurate that each statement listed described the objective job characteristics. The variables were ordinal and a 7-point Likert type scale was used ranging from “very

inaccurate" to "very accurate" as presented in Table 8 that represents a sample statement for Section 1 and Table 9 that represents a sample statement for Section 2.

Table 8. Question from Section 1 of Hackman and Oldham's (1980) JDS

How much *autonomy* is there in your job? That is, to what extent does your job permit to you to decided *on your own* how to go about doing the work?						
1	2	3	4	5	6	7
Very little; the job gives me almost no personal "say" about how and when the work is done		Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work			Very much; the job gives me complete responsibility for deciding how and when the work is done	

Table 9. Question from Section 2 of Hackman and Oldham's (1980) JDS

How accurate is the statement in describing your job?						
1	2	3	4	5	6	7
Very inaccurate	Mostly inaccurate	Slightly inaccurate	Uncertain inaccurate	Slightly accurate	Mostly accurate	Very accurate
The job requires me to use a number of complex or high-level skills						

For each variable measured by the JDS, questionnaire items were averaged to yield a summary score for the listed variables. As shown in Table 10, *skill variety* was comprised of Item 4 in Section 1 and items 1 and 5 (reversed scoring) in Section 2; *task identity* was comprised of Item 3 of Section 1 and items 3 (reversed scoring) and 11 in Section 2; *task significance* was comprised of Item 5 in Section 1 and Items 8 and 14 (reversed scoring) in Section 2; *autonomy* was comprised of Item 2 in Section 1 and items 9 (reversed scoring) and 13 in Section 2; and *job feedback* from the job itself was comprised of Item 7 in Section 1 and items 4 and 12 (reversed scoring) in Section 2

(Hackman & Oldham, 1980). With the exception of the five core job characteristics, dimensions that include feedback from agents and dealing with others (sections 1 and 2) were excluded from the questionnaire.

Table 10. JDS Items Used to Measure Selected Job Characteristics

Variables	Section 1	Section 2
Skill variety	#4	#1 and #5 [*R*]
Task identity	#3	#11 and #3 [*R*]
Task significance	#5	#8 and #14 [*R*]
Autonomy	#2	#13 and #9 [*R*]
Feedback from job	#7	#4 and #12 [*R*]

Source: Hackman & Oldham (1980); [*R*] indicates reversed scoring.

Growth Need Strength

Growth Need Strength (GNS) was used as a personality variable to describe the extent to which TNP employees had a high need for personal growth and development on the job (Hackman & Oldham, 1975). The JDS produced two separate measures of GNS, one from Section 6 (the "would like" format) and one from Section 7 ("the job juice" format"). In Section 6, respondents were asked to indicate the degree to which they would like to have specific elements present in their job; in Section 7, they were presented with various job choices in which they identified their preferences. The questionnaire provided two GNS measures of which one was calculated by averaging 6 items from Section 6, and other was calculated by averaging the 12 items in Section 7 (Hackman & Oldham, 1980). Both measures were acceptable and have been used by various researchers (Abdel-Halim, 1979; Blau, 1985; Tiegs, Tetrick, & Fried, 1992).

In my study, the GNS of TNP members was measured by using the "would like" format in Section 6 of the JDS where items were based on a 7-point Likert type scale with responses ranging numerically from 4 to 10. The 7-point scale ranged from "would like having this only a moderate amount" through "would like having this very much" to "would like having this extremely much." Hackman and Oldham (1980) emphasized that subtracting 3 from each item score would result in a summary scale ranging from 1 to 7. Therefore, the original scale was transformed to a standard 1 to 7 scale prior to analysis by subtracting a constant of 3 from each item. Section 6 contained 11 items of which 5 were not relevant to GNS (items #1, 4, 5, 7, 9) and were therefore not scored in my study. The GNS measures were comprised of items #2, #3, #6, #8, #10, #11: (a) stimulating and challenging work; (b) changes to exercise independent thought and action in my job; (c) opportunities to learn new things from my work; (d) opportunities to be creative and imaginative in my work; (e) opportunities for personal growth and development in my job; and (f) a sense of worthwhile accomplishment in my work.

Motivating Potential Score (MPS)

A summary score reflecting the overall motivating potential of an employee in terms of the five job characteristics was determined by calculating a motivating potential score (MPS) as computed by Hackman and Oldham (1975) and shown in Table 11.

Table 11. The MPS Formula As Computed By Hackman and Oldham (1975)

$$\text{MPS} = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \text{ X Autonomy X Job Feedback}$$

High scores on the MPS index were descriptive of enriched jobs whereas low scores were indicative of unenriched jobs (Abdal-Halim, 1979). When compared with other techniques of combining job characteristic scales (e.g., additive), the calculation presented in Table 11 was found to yield essentially the same results (Hackman & Oldham, 1976). However, the multiplicative method proposed by Hackman and Oldham appears to have as much validity as other likely methods (Umstot, Bell, & Mitchell, 1976).

Reliability and Validity

Hackman and Lawler (1971) developed a conceptual framework on job dimensions by focusing on employee reactions to job characteristics in order to test the reliability and validity of measures consisting of variety, autonomy, task identity, and feedback. Descriptions were made by employees and supervisors through Hackman and Lawler's use of Turner-Lawrence procedures and by subjectively following job observations and interviews. In general, internal consistency reliabilities reported for employee and supervisor ratings were estimated. The dimensions that made up each of the four job characteristic scores ranged from .75 to .90 for employees and .68 to .91 for supervisors are presented in Table 12.

Table 12. Estimated Reliabilities of the Job Dimensions

Dimensions	Employees	Supervisors	Turner-Lawrence
Variety	.90	.91	.86
Autonomy	.77	.68	.89
Task Identity	.77	.86	.95
Feedback	.75	.75	.97

Source: Hackman & Lawler (1971)

Hackman and Lawler (1971) also reported high convergent validity among the four sets of job characteristics. In addition to these job characteristics, Hackman and Oldham (1975) revised their measures and added task significance as a new measure based on results gathered from 658 employees working on different jobs in seven organizations. Internal consistency reliabilities ranged from a high of .71 (skill variety) to a low of .59 (task identity). In general, the results suggested that internal consistency of the scales and discriminant validity of the items were proven to be satisfactory.

In another study, Abdel-Halim (1979) measured enrichment by the five core job characteristics included in the JDS developed and validated by Hackman and Oldham (1975, 1976). Abdel-Halim found that intercorrelations among the JDS scales ranged from .15 to .40 with a median of .25. The Spearman-Brown reliability estimates for these scales in his sample ranged from .62 (task identity) to .78 (feedback).

Aldag et al. (1981) emphasized that six criteria are used to assess the psychometric quality of the JDS: (a) internal consistency reliability, (b) test-retest reliability, (c) convergent validity, (d) discriminant validities, (e) dimensionality, and (f) substantive validity. However, the internal consistency reliability estimates reported for the JDS are adequate for research purposes even though such reliabilities are sometimes achieved by asking the same question in a manner that is slightly reworded. Aldag et al. (1981) argued that only two studies (Baird, 1976; Brief & Aldag, 1975) had been designed to examine test-retest reliability. Other than these studies, the level of convergent validity for the JDS appeared to be acceptable. Pierce and Dunham (1978) also reported that the JDS significantly converged. Although Aldag et al. (1981) claimed

that discriminant validity is questionable, Hackman and Oldham (1975) argued that researchers who have used the JDS with several thousand respondents across several organizations indicated satisfactory discriminant validity. In terms of substantive validity, variables measured by the JDS were found to relate to one another and were generally predicted by the theory on which the instrument was based. In short, the substantive validity of the JDS has been established, and the job characteristics are intercorrelated as found by several researchers (Hackman & Oldham, 1980; Hackman & Lawler, 1971; Taber & Taylor, 1990). Finally, factor analytic results have revealed the evidence available on dimensionality. Of note, however, the question of dimensionality appears to be more complex and thus should be treated with caution.

Role Conflict and Role Ambiguity

Role related variables (role conflict and role ambiguity) were measured by using Rizzo et al.'s (1970) role conflict and role ambiguity scales. While the role conflict subscale consisted of 8 items that were all worded negatively, the role ambiguity subscale consisted of 6 items that were positively worded (see Appendix G). A 7-point Likert scale was employed (1= very false to 7 = very true) for members of the TNP to rate the accuracy of statements regarding their current work situations. Eight statements designed by Rizzo et al. were used to measure role conflict followed by six statements (9 through 14) that measured role ambiguity.

1. I have to do things that should be done differently.
2. I work on unnecessary things.

3. I receive an assignment without adequate manpower to complete the assignment.
4. I receive an assignment without adequate resources and materials to execute the assignment.
5. I work with two or more groups who operate quite differently.
6. I have to ignore a rule or policy in order to carry out an assignment.
7. I receive incompatible requests from two or more people.
8. I do things that are apt to be accepted by one person and not accepted by others.
9. I know exactly what is expected of me. [R]
10. I feel certain about how much authority I have. [R]
11. Clear, planned goals and objectives exist for my job. [R]
12. I know that I have divided my time property. [R]
13. I know what my responsibilities are. [R]
14. Explanation is clear of what has to be done. [R]

Six statements (items 9-14) were worded positively and reverse scored in an effort to reduce response bias. Thus, higher subscale scores with role ambiguity items reverse scored showed higher levels of role ambiguity and role conflict.

These scales were chosen in my study due to their established psychometric properties (Schuler, Aldag, & Brief, 1977) and wide usage in role theory research. In fact, Rizzo et al's (1970) role conflict and role ambiguity scales have been used in 85% of

role related studies (Jackson & Schuler, 1985) including the Turkish context (Ceylan & Uluturk, 2006; Esatoglu, Agirbas, Akbulut, & Celik, 2004; Sabuncuoglu, 2008).

Reliability and Valildity

Role conflict and role ambiguity items were subjected to reliability analysis by Rizzo et al. (1970) through the use of an interative technique in which selected items contributed to the reliability of the final sets for each scale. In their study, reliabilities for role conflict ranged from .81 to .82, and role ambiguity ranged from .78 to. 80. The results of their factor analyses also revealed that role conflict and role ambiguity emerged as separate dimensions. For example, the intercorrelations between role measures were .25 for one sample and .01 for the other indicating that relative independence existed between the role measures.

Hang-Yue, Foley, and Loi (2005) examined the effects of role ambiguity and role conflict on positive job outcomes in an Asian setting by using Rizzo et al.'s (1970) scale for both role conflict and role ambiguity. The coefficients for role ambiguity were .90 and .83 for role conflict that indicated the scale's reliability. In another study, when Jaramillo et al. (2005) investigated the effects of internal police stress (i.e., role ambiguity, role conflict) on organizational commitment, all reliability indices were above .080 (i.e., .85 for role ambiguity, .83 for role conflict). Rizzo et al.'s scales of role conflict and role ambiguity have also been widely used and tested in other non-Western cultures. For example, in a study conducted in the United Arab Emirates, Yousef (2002) found that these scales were reliable measures of role conflict and role ambiguity thus confirming the convergent and discriminant validity of Rizzo et al.'s scales.

Despite the considerable support for the reliability and validity of Rizzo et al.'s (1970) scales, there has also been criticism and debate regarding occupational stress in relation to discriminant, convergent, and predictive validity of their measurement scales (Gilboa, Shirom, Fried, & Cooper, 2008; McGee et al., 1989; Tracy & Johnson, 1981). For example, in an analysis of factor loadings, Tracy and Johnson found that subjects responded much more clearly to the stressors and comfort dimensions than to the dimensions of role conflict and role ambiguity on the items. As a result, they argued that there is doubt regarding the meaning of each scale. McGee et al's study provided further support to Tracy and Johnson (1981). Conversely, Netemeyer, Johnson, and Burton (1990) found support for the convergent and discriminant validity of Rizzo et al.'s role conflict and role ambiguity scales. Using the assessment of a structural model, they examined the measurement properties of role ambiguity and role conflict scales in which items and reliabilities as well as various extracted estimates were all reported to be acceptable. Furthermore, when Netemeyer et al. compared the 1-dimensional model to the 2-factor model (separate role conflict and role ambiguity factors), they found the 2-factor model to be superior. Consistent with Netemeyer et al., the 14-item role conflict and role ambiguity scale (i.e., role conflict, 8 items; role ambiguity, 6 items) were best fit by factor models that included two factor solutions (Model B) in Smith, Tisak, and Schmieder's (1993) samples. On the other hand, a single factor solution (Model A) was not found to provide an adequate fit of the model to the data. The factor correlations for Model C also supported the discriminant validity of the two dimensions.

Role (Work) Overload

Role overload was measured with the revised Quantitative Workload Inventory (QWI) developed by Spector and Jex (1998) that measures the perceived amount of work in terms of pace and volume. Originally, the QWI was designed to assess both qualitative workload (work difficulty) and quantitative workload (how much work there is). In the initial version that was utilized by Spector (1987), the QWI consisted of 8 items. However, in subsequent studies, it became apparent that some items were problematic and that by eliminating them would increase internal consistency of the scales. For example, one item was dropped for the subsequent version (Spector & Jex, 1988), and eventually two more items were dropped. In the final version, only five items concerning quantitative workload were kept.

Each item in the QWI contained a statement regarding the amount of work in which TNP respondents were asked to indicate how often each statement occured in their workplace ranging from 1 (less than once per month or never) to 5 (several times per day) (see Appendix H). Summing the responses to each item produced a total score ranging from 5 to 25 with high scores representing a high level of workload. The following questions designed by Spector and Jex (1998) were used in my study to measure work overload.

1. How often does your job require you to work very fast?
2. How often does your job require you to work very hard?
3. How often does your job leave you with little time to get things done?
4. How often is there a great deal to be done?

5. How often do you have to do more work than you can do well?

Reliability and Validity

In addition to Spector and Jex (1998) who reported an average internal consistency of .82 across several samples, Keser (2006), a Turkish researcher, also found that internal consistency reliabilities were acceptable (i.e., higher than .70) in all of the scales designed by Spector and Jex.

Using meta-analysis, Spector and Jex (1998) combined the results of 18 studies in order to provide estimates of the relationship between their scales and other variables. For the work overload scale, moderate validity indicated some objectivity to self-reported data. For example, Spector and Jex expected that the number of symptoms reported to doctors would be correlated with the number of doctor visits. Essentially, this correlation provided an assessment of convergent validity in that the more a person reported symptoms, the more likely it was expected that he or she would visit the doctor. In addition, the results of Spector and Jex's meta-analysis provided evidence for nomological validity by summarizing relations of their scales with other variables. Nomological validity from meta-analysis indicated a pattern of correlations that conformed reasonably well to results expected based on previous occupational stress theory and research conducted by Jex and Beehr (1991). For the most part, correlation between Spector and Jex's (1998) scales and other variables were as expected. More specifically, job stressor scales were correlated with affective strains and having symptoms, but the workload scale had a smaller correlation when compared to the other two job stressor scales.

Personal Characteristics

The following personal characteristic variables were included in my study: gender, tenure, level of education, marital status, number of children, management level or position, age, and working unit.

Gender

Gender referred to the sex of TNP members that was measured by asking participants to select male or female. This dichotomous variable represented whether the respondent was female (0) or male (1).

Tenure

As an interval measure, organizational tenure was measured by the number of years that respondents had worked for the Turkish National Police. Respondents were asked to choose how long they had worked at the TNP in years and months.

Level of Education

Respondents were asked to indicate the highest educational degree they had achieved. Level of education was an ordinal scale that was divided into five categories ranging from 1= secondary school; 2 = high school; 3 = associate's degree; 4 = bachelor's degree; and 5 = a master's or doctorate degree.

Marital Status

Marital status referred to being either married or single. Separated, divorced, or widowed were not included in this question. Like gender, marital status was measured as a dichotomous variable to determine if the member of the TNP was married (1) or unmarried (0).

Number of Children

The number of children was a ratio scale variable measured by asking participants to select the number of children they had.

Management Level

Management level was treated as an ordinal level in which respondents were asked to indicate their current management level that consisted of three categories: 1 = police officer; 2 = first level supervisor (i.e. sergeant, lieutenant, captain); and 3 = mid-level supervisor (i.e. superintendent, 3rd class superintendent, 4th class superintendent).

Control Variables

Two personal characteristics were selected as control variables, specifically age and working unit.

Age

As an interval variable, age was measured by asking respondents to choose their actual age in years.

Working Unit

Based on the activity report of the General Directorate of Security (2009), respondents were asked to choose their current working unit out of a possible eight nominal scales that included: 1 = judicial and preventive units; 2 = traffic units; 3 = crime investigation; 4 = human resources units; 5= logistics units; 6 = international affairs units; and 7= internal investigation and consultation units, 8= other.

Table 13 provides a summary of the measurement variables that have been discussed.

Table 13. Summary of the Measurement Variables

Variables	Measurement	Researchers	Scale	Item
Affective commitment	Affective Commitment Scale (ACS)			6 items
Continuance commitment	Continuance Commitment Scale (CCS)	Meyer & Allen (1997)	7-point Likert	7 items
Normative commitment	Normative Commitment Scale (NCS)			6 items
Job satisfaction	Minnesota Satisfaction Questionnaire (MSQ)	Weiss et al. (1977)	5-point Likert	20 items
Skill variety				3 items
Task identity				3 items
Task significance	Job Diagnostic Survey (JDS)	Hackman & Oldham (1980)	7-point Likert	3 items
Autonomy				3 items
Job feedback				3 items
Growth Need Strength				6 items
Role conflict		Rizzo et al. (1970)	7-point Likert	8 items
Role ambiguity		Rizzo et al. (1970)	7-point Likert	6 items
Role overload	Quantitative Workload Inventory (QWI)	Spector & Jex (1998)	5-point Likert	5 items
Personal (Demographic) Characteristics				8 items

Data Collection

An e-mail URL embedded electronic survey questionnaire consisting of six parts was administered to police officers and first level and mid-level supervisors who represented the TNP. The first five parts were comprised of (a) organizational commitment that included affective, continuance, and normative commitment (cf., Appendix D); (b) job satisfaction (cf., Appendix E); (c) job characteristics and growth need strength (cf., Appendix F); (d) role conflict and role ambiguity (cf., Appendix G), and (e) role overload (cf., Appendix H).

The final part of the questionnaire included personal or demographic characteristics. Although many self-administered questionnaires are designed to gather personal demographic information at the beginning of an instrument, professionals have recommended that these questions and any other easily answered ones should be asked at the end. For example, after some fatigue or impatience in filling out a survey, respondents typically prefer to end the session by simply checking boxes that are simple to answer (Nardi, 2006; O'Sullivan et al., 2003). Therefore, the final part of my questionnaire (cf., Appendix I) was designed to identify the following personal or demographic characteristics used as either an independent or a control variable in the data analysis: (a) gender, (b) tenure, (c) level of education, (d) marital status, (e) number of children, (f) age, (g) management level, and (h) working unit.

Because the questionnaire was administered in Turkey, the original English version was translated into Turkish by a translator with appropriate credentials. To test the accuracy, validity, and reliability of translation, the questionnaire was

translated back to English as well. To avoid possible validity threats, however, the translator was not informed about the back translation of the Turkish version into English upon receiving the first version. Five days later, the translator was contacted to translate the Turkish version back into English. These procedures were suggested by Hofstede (1980) when cross-national research instruments are translated into another language. All versions were checked and necessary modifications were conducted to ensure that the Turkish and English questionnaire versions matched.

After approval was obtained from TNP to administer my survey, participation was on a voluntary basis. QuestionPro, a software program that includes a full set of tools for creating surveys, sending invitations, and analyzing the survey data, was used to design, publish, and send the survey questions (Online Survey Software, 2009). In addition, the survey questions were published on QuestionPro's official Website in order to make it accessible via the Internet.

Once the survey was complete, e-mails that included a link to the Web survey were first sent to all police officers and first level and mid-level supervisors involved in the sample. In addition, the e-mail contained TNP's permission to conduct the survey, an invitation letter, and other signed letters that explained the objectives of my study and instructions on how to complete the questionnaire (see Appendix J). Finally, anonymity was provided through the QuestionPro software program.

After 10 days following the first e-mail, a second e-mail was sent as a reminder to encourage those who had not yet completed the survey to do so at their earliest convenience and thanking respondents who had already completed questionnaires. To increase the response rate as suggested by Dillman (2000) and

O'Sullivan (2003), a second follow-up was e-mailed one week after the first follow-up e-mail.

Human Subjects

The Institutional Review Board (IRB) at VCU is charged with reviewing all research involving human subjects in order to ensure compliance with federal, state, and local regulations. The IRB must review and approve all activities that meet the definitions of research of human subjects before work can begin. Human subjects are living individuals about whom an investigator conducting research collects (a) information, specimens, or other data through intervention or interaction with an individual; or (b) identifiable private information (VCU, 2009). For the purposes of my study, I requested an expedited review or a type of low risk review that must be determined by the IRB at VCU for projects that rise to the level of human subjects.

Because research conducted by VCU researchers that involve foreign countries fall under VCU IRB policies and procedures, the survey for my study was applied to subjects who work in the Turkish National Police. Therefore, VCU IRB required me to submit additional requirements, namely consultant references, translated documents, and a letter of permission from the foreign institution (VCU, 2009). The survey materials were first approved in English followed by approval of the translations. Based on VCU's IRB policy and procedures, all necessary permission was obtained from TNP and IRB before the survey was administered to my study sample (see Appendix K).

Data Analysis Procedure

The Statistical Program for the Social Sciences (SPSS) was used to analyze data collected from returned electronic surveys. Two important distinctions are included between descriptive and inferential statistics and between statistics for univariate and multivariate distributions. First, while descriptive statistics are used to summarize and describe data, inferential statistics are used to make inferences to larger populations and to use data from the cases studied in order to conclude information in regard to cases that are not studied. Second, while univariate statistics address the distribution of the values of one variable, multivariate statistics measure the joint distribution of two or more variables that are used to investigate the relationship between and among variables (O'Sullivan et al., 2003).

First, descriptive statistics in my study were reported in order to identify and describe the basic characteristics of the respondents. For continuous or measurement data, measures of central tendency and measures of variability were reported followed by a presentation of the categorical data frequency of each value.

Second, Cronbach's alpha was used to calculate the testing in order to determine reliability of the scales used in the study (Tabachnick & Fidell, 2007).

Third, factor analysis was employed in my study. Most factor analyses fall into the exploratory type that describe and summarize data by grouping together variables that are correlated without usually having prior knowledge relating to the factors. On the other hand, confirmatory factor analysis tested theories and hypotheses regarding latent processes (e.g., factors) (Tabachnick & Fidell, 2007). In my study, exploratory factor analysis was used to consolidate the number of variables into smaller sets of factors or to create a more manageable number of indices.

Fourth, hierarchal multiple regression analysis was used to assess the hypothesized direct relationships between dependent and independent variables with three components of organizational commitment (affective, continuance, and normative) as the dependent variable and four categories of antecedents as the independent variables. The independent variables consisted of four personal characteristics (tenure, education, marital status, and number of children), five job characteristics (skill variety, task identity, task significance, job feedback, and autonomy), intrinsic and extrinsic job satisfaction, and three role characteristics (role ambiguity, role conflict, and role overload).

Fifth, MANOVA was used to test whether any significant differences existed between groups on the demographic variables of gender and management level that could account for differences in the variables of affective, continuance and normative commitment.

Sixth, SPSS macro with bootstrapping provided by Preacher and Hayes (2008) was used to investigate the mediating effect of overall job satisfaction on the relationship between job characteristics and three components of organizational commitment.

Seventh and finally, SPSS macro with the MODPROBE approach provided by Hayes and Matthes (2009) was used to examine the moderating effect of growth need strength (GNS) on the relationship between the five job characteristics and three components of organizational commitment.

CHAPTER IV

ANALYSIS AND FINDINGS

In Chapter IV, the results of the quantitative data analysis procedures outlined in Chapter III are presented. The purpose of my study was to (a) examine the relationship of job satisfaction, job characteristics, role characteristics, and selected demographic variables to affective, continuance, and normative commitment; (b) identify the levels of affective, continuance, and normative commitment of police officers and first level and mid-level supervisors in the Turkish National Police (TNP); (c) compare the differences between affective, continuance, and normative commitment levels of TNP police officers and first and mid-level supervisors; (d) examine the role of growth need strength (GNS) as a moderator between five job characteristics and three components of organizational commitment; and (e) examine the overall job satisfaction as a mediator between core job characteristics and three components of organizational commitment.

The dependent variables included (a) affective, (b) continuance, and (c) normative commitment, and the four main independent variables consisted of (a) personal characteristics (tenure, level of education, gender, marital status, number of children, and management level), (b) job characteristics (skill variety, task identity, task significance, autonomy, and job feedback), motivating potential score (MPS), and growth need strength (GNS) (c) job satisfaction (intrinsic, extrinsic, and overall satisfaction), and (d) role characteristics (role ambiguity, role conflict, and role overload).

This chapter is comprised of four main sections. The first section contains the data screening where data were screened for entry errors or other anomalies and response rates were reported. The second section includes the sample's demographical characteristics and presents the descriptive statistics for research variables in addition to scale assessments that include reliability and validity analyses for all scales used in my questionnaire. The third section contains the results of hierarchical multiple regression analyses, multivariate analysis of variance (MANOVA), and mediation and moderation analyses. Finally, hypotheses testing are discussed.

Data Screening

Data were collected by administering an electronic e-mail survey to police officers and first level and mid-level supervisors employed by the TNP in four Turkish cities (e.g., Ankara, Istanbul, Malatya, and Diyarbakir). After 1,429 police officers, first level police supervisors, and mid-level police supervisors were sent an e-mail requesting participation in my survey, 13 were returned with an error message stating that their e-mail addresses were invalid and thus could not be forwarded to the selected recipients. By the end of the collection period, 867 surveys had been returned for an overall response rate of 61.2%. A review of the returned questionnaires, however, indicated that 21(1.5%) questionnaires were not usable due to incomplete responses.

According to Tabachnick and Fidell (2007), if 5% or less data points are missing in a random pattern from a large dataset, the problems are less serious. Missing completely at random (MCAR) exists when missing values are randomly distributed across all observations. The SPSS Missing Values Analysis (MVA) option

supported Little's MCAR test that assumes the data to be MCAR if the *p* value is not significant (Garson, 1998). Based on Garson's statements, the pattern of missing data was checked by employing the SPSS Missing Value Analysis option, where correlations with Little's MCAR test revealed the value to be greater than .05 for affective commitment ($p = .488$), continuance commitment ($p = .804$), and normative commitment ($p = .602$) that indicated the missing values were random. According to Tabachnick and Fidell (2007), deletion is a good alternative if missing data appear to be a random subsample of the entire sample. The LISTWISE deletion method was applied in my study that is preferred over PAIRWISE deletion when a sample size is large in relation to the number of cases with missing data (Garson, 1998). In using this method, 21 cases were excluded from my original sample ($N = 867$) leaving 846 participants for analysis.

Response Rate

According to Ammentorp, Rasmussen, Norgaard, and Kofoed (2007), a response rate of less than 50% is often accepted and response rates of 50% to 60% are considered to be quite high in an electronic survey. Results indicated that the response rate achieved in my study was acceptable and met the criteria for a large sample size. In other words, participants represented the population from which they were drawn (Dillman, 2000; O'Sullivan et al., 2003). Data describing the survey responses are shown in Table 14.

Table 14. Surveys Sent to TNP Members and Response Rate

Response Group	Number of Surveys	Percentage
	ANKARA	
Total surveys e-mailed	377	
Not returned	137	36.3%
Total returned	240	63.7%
Total usable surveys	232	61.5%
Unusable returned	8	2.1%
	ISTANBUL	
Total surveys e-mailed	379	
Not returned	146	38.5
Total returned	233	61.5
Total usable surveys	229	60.4
Unusable returned	4	1.1
	MALATYA	
Total surveys e-mailed	322	
Not returned	132	41
Total returned	190	59
Total usable surveys	184	57.1
Unusable returned	6	1.9
	DIYARBAKIR	
Total surveys e-mailed	351	
Not returned	147	41.9
Total returned	204	58.1
Total usable surveys	201	57.3
Unusable returned	3	0.8
	Overall Response Rate	
Total surveys e-mailed	1,429	
Returned with an error message	13	
Not returned	549	38.8
Total returned	867	61.2
Total usable surveys	846	59.7
Unusable returned	21	1.5

Referring to Table 14, out of 377 police officers and police supervisors employed in Ankara, 240 responded to the survey for a response rate of 63.7%, and out of 379 police officers and police supervisors employed in Istanbul, 233 responded for a response rate of 61.5%. However, the response rate for Malatya and Diyarbakir located in the eastern part of Turkey was slightly less from the cities located in Region 1 (e.g., Ankara and Istanbul) but still acceptable (Ammentorp et al., 2007; Dillman, 2000). Of the 322 police officers and police supervisors invited to participate in Malatya, 190 responded to the survey for a response rate of of 59%. Finally, 242 completed questionnaires were returned from Diyarbakir for a response rate of 58.1%.

Overall, there was one distribution of 1,429 surveys: Ankara, 377; Istanbul, 379; Malatya, 322; and Diyarbakir, 351 for a total of 867 (61.2%) in which 539 TNP participants represented police officers and 328 were first and mid-level police supervisors. Qualified participants who returned completed e-mailed surveys totaled 522 police officers and 324 police supervisors (59.7%). Out of the 1,429 surveys, 21 (1.5%) qualified responders returned incomplete and thus unusable questionnaires (17 police officers and 4 police supervisors).

Sample Characteristics and Descriptive Statistics

Data analysis in this phase consisted of descriptive statistics that were included in my study in order to provide a better understanding of the research sample and variables by determining the frequency, central tendency, and measures of variability. For continuous or measurement data, measures of central tendency as well as variability were reported, and for categorical data, frequency of each value was reported. The demographic questions were related to gender, marital status, education, management level, working unit, age, number of children, and tenure.

Sample Characteristics

The distribution of the 846 women and men who participated in my study is presented in Table 15. As shown, the majority of the sample was comprised of male police officers and police supervisors in which males accounted for 91.6% of the respondents while females accounted for 8.4%. The gender ratio in the actual population of TNP was approximately 94% male to 6% female; therefore, gender in my study was close to the gender ratio of TNP's entire population.

Table 15. Gender Data, (N = 846)

	Gender	Frequency	%	Valid %	Cum. %
Valid	Female	71	8.4	8.4	8.4
	Male	775	91.6	91.6	100.0
	Total	846	100.0	100.0	

Marital status was classified as being either married or single. As shown in Table 16, out of 846 respondents, 664 (78.5%) were married and 182 (21.5%) were single.

Table 16. Marital Status Data, (N = 846)

	Marital Status	Frequency	%	Valid %	Cum. %
Valid	Married	664	78.5	78.5	78.5
	Single	182	21.5	21.5	100.0
	Total	846	100.0	100.0	

The respondents' educational levels were also predicted to influence organizational commitment among TNP members. The highest degrees earned by police officers and police supervisors (*N* = 846) are depicted in Table 17. As shown, one (.1%) respondent reported having a secondary school degree, 41 (4.8%) reported

high school degrees, 274 (32.4%) reported associate degrees, 402 (47.5%) reported bachelor degrees, and 128 (15.1%) reported that they had attained either a master's or doctorate degree.

Table 17. Education Data, (N = 846)

	Education	Frequency	%	Valid %	Cum. %
Valid	Secondary school	1	.1	.1	.1
	High school	41	4.8	4.8	5.0
	Associate's degree	274	32.4	32.4	37.4
	Bachelor's degree	402	47.5	47.5	84.9
	Master's or Doctorate	128	15.1	15.1	100.0
	Total	846	100.0	100.0	

Respondents' management levels are presented in Table 18. First level supervisors included sergeant, lieutenant, and captain, while mid-level supervisors were comprised of superintendent, chief superintendent 4th class, and chief superintendent 3rd class. The highest group of participants (61.7%) was identified as police officers, while 17% were made up of first level supervisors, and 21.3% were mid-level supervisors.

Table 18. Management Level Data, (N = 846)

Management Level	Frequency	%	Valid %	Cum. %
Police officer	522	61.7	61.7	61.7
First level supervisor	144	17.0	17.0	78.7
Mid-level supervisor	180	21.3	21.3	100.0
Total	846	100.0	100.0	

Although TNP members perform a variety of job duties, respondents were asked to select one out of eight working units in relation to their primary job responsibilies as identified by the activity report of the General Directorate of Security (2009). As shown in Table 19, the majority of respondents (*n* = 436, 51.5%) fell into the judicial and preventive category, a ratio that is close to TNP's population distribution of police officers and police supervisors. The judicial police work closely with the administrator of justice while police officers and supervisors who are employed in preventive units perform the usual functions relating to the safety of persons and property. The remaining respondents were employed in traffic (*n* = 61, 7.2%), crime investigation (*n* = 51, 6%), human resources (*n* = 112, 13.2%), logistics (*n* = 88, 10.4%), international affairs (*n* = 60, 7.1%), internal investigation (*n* = 26, 3.1%), and other (*n* = 12, 1.4%) working units.

Table 19. Working Unit Data, (N = 846)

Working Units	Frequency	%	Valid %	Cum. %
Judicial and preventive	436	51.5	51.5	51.5
Traffic	61	7.2	7.2	58.7
Crime investigation	51	6.0	6.0	64.8
Human resources	112	13.2	13.2	78.0
Logistics	88	10.4	10.4	88.4
International affairs	60	7.1	7.1	95.5
Internal investigation	26	3.1	3.1	98.6
Other	12	1.4	1.4	100.0
Total	846	100.0	100.0	

Table 20 is a breakdown of descriptive statistics for continuous demographic variables that included age, number of children, and tenure. As shown, the age of

respondents ranged between a minimum of 20 and a maximum of 50 years. The sample's mean age was 33 years with a standard deviation of six years.

The mean number of children ranging from 0 to 7 was 1.3 with a standard deviation of 1.16. The data revealed that 263 (31.1%) respondents had no children; 192 (22.7%) had one child; 265 (31.3%) had two children; 106 (12.5%) had three children; 12 (1.4%) had four children; and 5 (.6%) had five children. Only one respondent had six children and two respondents had seven children.

Regarding tenure, the number of years that police officers and police supervisors had worked for TNP ranged from 1 to 30 years. The mean was 9.87 years of service (*SD* = 5.64) with a median of 10 years.

Table 20. Descriptive Statistics for Continuous Demographic Variables (N = 846)

	Range	Minimum	Maximum	Mean	*SD*
Age	30	20	50	32.6797	5.59799
Children	7	0	7	1.3392	1.16133
Tenure (in years)	29	1	30	9.8783	5.64035

Descriptive Statistics for Scale Variables

The means, standard deviations, and minimum and maximum values for the three organizational commitment scales─(a) affective commitment (ACS), (b) continuance commitment (CCS), and (c) normative commitment (NCS)─were comprised of 6, 7, and 6 items, respectively, as presented in Table 21. To control for agreement response bias, three items were recoded in the ACS and one item was recoded in the NCS because they were negatively stated. Statements in survey Item 3, "I do not feel like part of the family at my organization"; Item 4, "I do not feel

emotionally attached to this organization"; Item 6, "I do not feel a strong sense of belonging to my organization"; and Item 14, "I do not feel any obligation to remain with my current employer" were reverse coded before creating the following index variables: 1 was recoded as 7; 2 was recoded as 6; 3 was recoded as 5; 5 was recoded as 3; 6 was recoded as 2; and 7 was recoded as 1. Affective commitment had the highest mean (5.23) with a standard deviation of 1.24, continuance commitment had the lowest mean (4.74) with a standard deviation of 1.20, and normative commitment had a mean of 5.08 out of a total possible score of seven.

Table 21. Descriptive Statistics for Commitment Variables

Variables	Minimum	Maximum	Mean	*SD*
Affective commitment	1.00	7.00	5.2338	1.24468
Continuance commitment	1.00	7.00	4.7423	1.20809
Normative commitment	1.00	7.00	5.0885	1.27336

Descriptive statistics for the organizational commitment scale items are presented in Table 22. As shown, the standard deviation of TNP members' (N = 847) responses in the ACS ranged from 1.43 to 2.05, and variances of the 6 items ranged from 2.07 to 4.22. For example, "I do not feel like part of the family at my organization" had the highest variance (4.22), and "This organization has a great deal of personal meaning for me" had the highest mean (5.74).

For the CCS, the standard deviation ranged from 1.70 to 1.98, and variances of the 7 items ranged from 2.91 to 3.92. For example, "I believe that I have too few options to consider leaving this organization" had the highest variance (3.92); "It

would be very hard for me to leave my organization right now, even if I wanted to" had the highest mean (5.4); and "I believe that I have too few options to consider leaving this organization" had the lowest mean (4.31).

Table 22. Descriptive Statistics for Individual Commitment Items, (N = 846)

Commitment Items	Mean	*SD*	Variance
AC1	5.1868	1.82114	3.317
AC2	5.6005	1.56929	2.463
AC3	4.5449	2.05538	4.225
AC4	5.2530	1.85315	3.434
AC5	5.7423	1.43903	2.071
AC6	5.0757	1.93356	3.739
	Mean	*SD*	Variance
CC1	5.4031	1.70816	2.918
CC2	4.9385	1.90198	3.618
CC3	4.8995	1.81918	3.309
CC4	4.3191	1.98092	3.924
CC5	4.5532	1.78193	3.175
CC6	4.5414	1.89239	3.581
CC7	4.5414	1.89239	3.581
	Mean	*SD*	Variance
NC1	5.4799	1.69551	2.875
NC2	5.1998	1.67164	2.794
NC3	4.4929	2.02279	4.092
NC4	5.2175	1.70554	2.909
NC5	4.6513	1.90239	3.619
NC6	5.4894	1.56266	2.442

Finally, the standard deviation for the NCS ranged from 1.56 to 2.02, and the variances of the 6 items ranged from 2.44 to 4.09. For example, "I would feel guilty if I left my organization now" had the highest variance of 4.09, and "I owe a great deal to my organization" had the highest mean of 5.48. Hackman and Oldham (1980) suggested that the instrument should be used to interpret at the middle range of scale scores. Thus, scores less than or equal to 3.5 were considered to be low commitment, and scores greater than 3.5 were recorded as high commitment. The mean scores for

each item of ACS, CCS, and NCS were above the midpoint on the 7-point Likert scale.

The means, standard deviations, and minimum and maximum values for the three job satisfaction scales are illustrated in Table 23: (a) intrinsic job satisfaction, a 12-item scale; (b) extrinsic job satisfaction, a 6-item scale; and (c) general or overall job satisfaction, a 20-item scale. Mean scores used to evaluate TNP members' job satisfaction levels indicated that intrinsic job satisfaction had the highest score (*M* = 3.38) with a standard deviation of .73, while extrinsic job satisfaction had the lowest score (*M* = 2.98) with a standard deviation of .86. Finally, overall job satisfaction had a mean of 3.22 out of a total possible score of 5. As previously mentioned, a Likert-type scale was used in my study that included five response alternatives for each of the 20 factors: very dissatisfied = 1; dissatisfied = 2; neutral = 3; satisfied = 4; and very satisfied = 5. Based on this 5-point scale, a score ranging from 2.50 to 3.49 was interpreted as neutral, indicating that respondents could not decide on whether they were satisfied or not with a particular job facet; a mean score ranging from 3.50 to 4.49 was interpreted as satisfied, and a score of 4.50 to 5.00 was interpreted as very satisfied.

Table 23. Descriptive Statistics for Job Satisfaction Variables

Job Satisfaction Variables	Minimum	Maximum	Mean	*SD*
Intrinsic satisfaction	1.00	5.00	3.3858	.73739
Extrinsic satisfaction	1.00	5.00	2.9856	.86107
Overall satisfaction	1.00	5.00	3.2198	.73302

Descriptive statistics for the intrinsic and extrinsic items included in the job satisfaction scales are presented in Table 24. Two items (e.g., working conditions and coworkers) were specific to the overall job satisfaction score that was characterized as neither intrinsic nor extrinsic. The TNP members' satisfaction with their working conditions had a mean score of 2.62 with a standard deviation of 1.24, whereas the mean score for satisfaction with coworkers was 3.22 with a standard deviation of 1.13. To generate overall job satisfaction, the mean scores for all 20 items were used. For example, the mean scores ranged from 2.62 (working conditions) to 3.98 (social service) with an overall job satisfaction of 3.22.

The mean scores for intrinsic job satisfaction items ranged from 2.77 to 3.98. Out of the 12 items, "social service" had the highest score (M = 3.98) with a standard deviation of .86, while "creativity" had the lowest score (M = 2.97) with a standard deviation of 1.19. In other words, respondents were most intrinsically satisfied with being able to do service activities for others. Respondents were basically "satisfied" about their level of satisfaction in 5 out of 12 intrinsic items: (a) moral values, (b) security, (c) social service, (d) authority, and (e) achievement. In addition, seven intrinsic items in which police officers and police supervisors were "neutral" regarding their level of satisfaction included: (a) activity, (b) independence, (c) variety, (d) social status, (e) ability utilization, (f) responsibility, and (g) creativity. The mean for all intrinsic satisfaction items was 3.38; thus, overall, TNP members (n = 846) were neutral in terms of intrinsic satisfaction.

Table 24. Descriptive Statistics for Individual Job Satisfaction Items

Intrinsic Job Satisfaction	Mean	*SD*	Variance
Activity	3.4385	1.07819	1.162
Independence	3.2329	1.23035	1.514
Variety	3.2825	1.16125	1.348
Social status	3.4031	1.09844	1.207
Moral values	3.5804	1.06256	1.129
Security	3.5579	1.11082	1.234
Social service	3.9775	.86111	.742
Authority	3.5946	.95455	.911
Ability utilization	3.2683	1.17372	1.378
Responsibility	2.7719	1.22738	1.506
Creativity	2.9716	1.19532	1.429
Achievement	3.5508	1.08421	1.176
Extrinsic Job Satisfaction	Mean	*SD*	Variance
Supervision-human relations	2.9255	1.21251	1.470
Supervision-technical	3.1489	1.19824	1.436
Policies and practices	3.1738	1.05777	1.119
Compensation	2.9586	1.21507	1.476
Advancement	2.7482	1.28504	1.651
Recognition	2.9586	1.19938	1.439
Overall Job Satisfaction	Mean	*SD*	Variance
Working conditions	2.6265	1.24414	1.548
Coworkers	3.2258	1.13569	1.290

The mean scores for the extrinsic job satisfaction items ranged from 2.74 to 3.17 (c.f., Table 24). Organizational policies and practices had the highest score (*M* = 3.17) out of the six items with a standard deviation of 1.05, while advancement had the lowest score (*M* = 2.74) with a standard deviation of 1.28. The results revealed that respondents were neither dissatisfied nor satisfied; however, they were undecided on their level of job satisfaction for all six of the extrinsic items: (a) supervision-

human relations, (b) supervision-technical, (c) policies and practices, (d) compensation, (e) recognition, and (f) advancement. The mean for all extrinsic satisfaction items was 2.98, thus indicating that overall, TNP members were neutral in terms of extrinsic satisfaction.

Table 25 shows the minimum and maximum scores, means, and standard deviations for the five job characteristics: (a) skill variety, (b) task identity, (c) task significance, (d) autonomy, and (e) job feedback. The scores were calculated using a composite of two different Likert type scales taken from the Job Diagnostic Survey (JDS) with a range from 1 to 7. In Section 1, a single item was provided for each job characteristic in which respondents identified the amount of variety that each characteristic was perceived to exist in their current jobs by reporting the number that best reflected their assessment. In Section 2, two items were provided for each job characteristic with one being negatively phrased. Survey items 46, 48, 50, 52, and 54 were reverse coded before creating index variables for the five job characteristics. Thus, each of the five subscales was calculated as composite scores whereas each scale represented an average of three survey questions.

The second scale assessed the accuracy of statements in describing the job. Based on a 7-point scale, scores from skill variety, task identity, task significance, and job feedback were found to have relatively high mean values (see Table 25). The only job characteristic variable scoring a mean lower than 4 was found in autonomy. The data revealed that skill variety (M = 4.55) and task significance (M = 5.54) received the highest agreement from the respondents (N = 846). On the other hand, respondents were “uncertain” regarding the degree to which the job provided substantial freedom

(*M* = 3.76) and job feedback (*M* = 4.41) and the required completion (task identity) of a whole and identifiable piece of work (*M* = 4.33).

Table 25. Mean Values and Standard Deviations of Job Characteristics Variables

Variables	Minimum	Maximum	Mean	*SD*
Skill variety	1.00	7.00	4.5556	1.42283
Task identity	1.00	7.00	4.3349	1.52550
Task significance	1.00	7.00	5.5457	1.33725
Autonomy	1.00	7.00	3.7620	1.45747
Job feedback	1.00	7.00	4.4165	1.28974

Table 26 presents the motivating potential score (MPS) of the job (79.70) as calculated by using the formula developed by Hackman and Oldham (1980).

Table 26. Calculation of Motivation Potential Score

Skill Variety Task Identity Task Significance Autonomy Job Feedback

$$\frac{4.55 + 4.33 + 5.54}{3} \times 3.76 \times 4.41 = 79.70$$

The descriptive statistics that determined whether or not the respondents had a desire to obtain growth from their jobs are indicated in Table 27. In my study, the "would like" format in Section 6 of the JDS was used based on a 7-point Likert type scale with items ranging from 4 to 10 where 4 = would like having this only in a moderate amount, through 7 = would like having this very much, to 10 = would like having this extremely much.

Hackman and Oldham (1980) emphasized that subtracting 3 from each item's score would result in a summary scale ranging from 1 to 7. Therefore, the original scale was transformed to a standard 1 to 7 scale prior to creating an index by subtracting a constant of 3 from each item. There were 11 items in Section 6 in which five were not relevant to GNS (Hackman & Oldham, 1980); therefore, they were not scored. Growth need strength measures comprised of survey items 55 to 60 indicated that the mean overall GNS scale resulted in 5.32 with a standard deviation of 1.24.

Table 27. Growth Need Strength (GNS) of the Respondents

	N	Minimum	Maximum	Mean	*SD*
GNS	846	1.00	7.00	5.3160	1.24390
Valid N	846				

Based on a scale from 1 to 7, scores from all six items were found to have high mean values. As shown in Table 28, there was no item that scored a mean lower than 4.0. The "a sense of worthwhile accomplishment in my work" item had the highest mean (5.89) whereas "stimulating and challenging work" had the lowest mean (4.21).

Table 28. Mean Values and Standard Deviations of GNS Items

Growth Need Strength Items	Mean	*SD*
Stimulating and challenging work	4.2128	1.72956
Changes to exercise independent thought and action in my job	4.8936	1.66780
Opportunities to learn new things from my work	5.6135	1.51466
Opportunities to be creative and imaginative in my work	5.4610	1.59963
Opportunities for personal growth and development in my job	5.8262	1.43723
A sense of worthwhile accomplishment in my work	5.8889	1.48744

Descriptive statistics for role related variables (e.g., role conflict, role ambiguity, and role overload) examined in my study are presented in Table 29. As shown, while the role conflict subscale had 8 items that were all worded negatively, the role ambiguity subscale had 6 items that were all worded positively. For the role conflict and role ambiguity variable, a 7-point Likert type scale was employed (1= very false to 7 = very true) in which TNP members rated the accuracy of statements regarding their current work situations. As previously mentioned, several items were reverse scored in an effort to reduce response bias. Thus, higher subscale scores (i.e., role ambiguity items reverse scored) resulted in higher levels of role ambiguity and role conflict. Each item for the work overload included a statement relating to the amount of work in which respondents indicated how often each occurred on a scale from 1 (less than once per month or never) to 5 (several times per day). Summing the responses to each item produced a total score with high scores being considered as a high level of workload. Based on a 7-point Likert type scale, Table 29 indicates that, on average, most respondents (n = 846) experienced a higher level of role conflict (4.29) when compared to role ambiguity (2.96). The mean score for role overload was 3.2 with a standard deviation of 1.02.

Table 29. Mean Values and Standard Deviations of Role Related Variables

Variables	Minimum	Maximum	Mean	*SD*
Role conflict	1.00	7.00	4.2900	1.11110
Role ambiguity	1.00	7.00	2.9618	1.12142
Role overload	1.00	5.00	3.2005	1.02554

Reliability of Scales

Reliability evaluates the degree of random error associated with a measure where errors may occur because the measure lacks stability or dependability. According to O'Sullivan et al. (2003), if a measure is said to be reliable, someone has determined that it is stable or dependable. In other words, reliability is about consistency or the expectation that there will not be different findings each time the measures are used, assuming that nothing has changed in what is being measured (Nardi, 2006). There are four ways to determine if the measures used by the researcher are reliable: (a) inter-rater reliability, (b) test-retest reliability, (c) parallel forms reliability, and (d) internal consistency reliability (Nardi, 2006; O'Sullivan et al., 2003). Consistent with previous research (Hackman & Oldham, 1975; Meyer & Allen, 1997; Rizzo et al., 1970; Spector, 1997; Weiss et al., 1967) the data were analyzed for internal consistency in my study. According to O'Sullivan et al. (2003), internal consistency applies to measures with multiple items and considers whether all of the items are related to the same phenomenon. To determine the internal consistency of the scales, Cronbach's alpha coefficient (*A* or α) was used that is considered to be the most widely used measure of instrument reliability that estimates the internal consistency or average correlation of items in a survey instrument to determine its reliability. An acceptable alpha level (.70) indicates that the scale items are tightly connected (Nachmias & Nachmias, 2000).

Reliability of Organizational Commitment Scales

As presented in Table 30, Cronbach's alpha level for the organizational commitment scales that ranged from 1 to 7 in my study were .79 for affective commitment, .77 for continuance commitment, and .82 for normative commitment

among TNP respondents (*N* = 846). The alpha coefficient shown for all affective, continuance, and normative commitment scales exceeded the minimum acceptable Cronbach alpha level of .70 recommended by Nunnally and Bernstein (1994) and thus indicated a good reliability.

Table 30. Cronbach`s Alpha Reliability Coefficients for Commitment Scales

Variables	Items	Cronbach's Alpha
Affective commitment	6	.786
Continuance commitment	7	.773
Normative commitment	6	.815

Reliability of Job Satisfaction Scales

Cronbach's alpha coefficients obtained from the short-form Minnesota Questionnaire were based on a scale from 1 to 5 in my study. The reliability coefficients ranged from .81 to .92 as reported in Table 31: (a) Cronbach's alpha was .89 for the intrinsic job satisfaction scale, (b) .81 for the extrinsic job satisfaction scale, and (c) .92 for the overall job satisfaction scale. Thus, the reliability coefficient of the measuring scales for intrinsic, extrinsic, and overall job satisfaction met the conventional cut-off of .70 (Nunnally & Bernstein, 1994).

Table 31. Cronbach's Alpha Reliability Coefficients for Job Satisfaction Scales

Variables	Items	Cronbach's Alpha
Intrinsic job satisfaction	12	.886
Extrinsic job satisfaction	6	.814
Overall job satisfaction	20	.924

Reliability of Job Characteristics and GNS Scales

Based on a scale from 1 to 7, the reliability coefficients for the five job characteristics and growth need strength (GNS) among TNP subjects (n = 846) were measured. As shown in Table 32, the coefficients for skill variety, task identity, task significance, autonomy, and job feedback items (n = 3) were .80, .83, .82, .81, and .75, respectively, and .88 for GNS items (n = 6). Although the lowest reliability estimate was found for the job feedback measure, this was still at an acceptable level of .75. Thus, each scale was found to be reliable.

Table 32. Reliability Coefficients for Job Characteristics and GNS Scales

Variables	Items	Cronbach's Alpha
Skill variety	3	.798
Task identity	3	.829
Task significance	3	.817
Autonomy	3	.806
Job feedback	3	.745
Growth Need Strength	6	.879

Reliability of Role Scales

The reliability coefficients for role conflict, role ambiguity, and role overload were .82, .79, .89, respectively. The results presented in Table 33 indicate that the internal consistency of each scale was very good or above the .70 reliability threshold. Thus, it appears that the data collected from the instrument were reliable.

Table 33. Cronbach's Alpha Reliability Coefficients for Role Scales

Variables	Items	Scales	Cronbach's Alpha
Role conflict	8	1-7	.816
Role ambiguity	6	1-7	.791
Role overload	5	1-5	.893

Validity and Factor Analysis

The validity of measurements can influence the accuracy of conclusions drawn after testing hypotheses. Therefore, it is important that the researcher be assured that his or her measurements are reliable and have been correctly identified. According to O'Sullivan et al., (2003), measurements are considered to be valid if they are devised to measure the intended assumptions drawn by the researcher.

The types of validity that social scientists are likely to encounter include: (a) content validity, (b) empirical validity, and (c) construct validity. In content validity, measurement instrument covers all conceptual attributes that the researcher attempts to measure (Nachmias & Nachmias, 2000). In other words, content validity is an equally subjective way to understand how well a set of items measure the complexity of a concept or variable under study. According to Nachmias and Nachmias, empirical validity is concerned with the relationship between a measuring instrument and the measured outcomes. Scientists have assumed that if a measuring instrument is valid, the results produced by applying the instrument and the relationships existing among the variables measured in the real world should be quite similar.

Finally, Nardi (2006) suggested that a better method of assessing the accuracy of a measure is to determine its construct validity. Therefore, construct validity was of

primary interest to my study. For example researchers can conduct construct validity by relating a measurement instrument to the general theoretical framework within which their studies are conducted in order to determine whether the instrument is logically and empirically tied to concepts and theoretical assumptions employed (O'Sullivan et al., 2003). For the findings of measurement to be meaningful, the instrument must display construct validity (Nachmias & Nachmias, 2000).

In my study, the validity of the questionnaire instruments was examined for construct validity. To justify the requirements, I ran the functions of exploratory factor analysis that is a statistical technique for classifying a large number of interrelated variables into a limited number of dimensions or factors. In addition, construct validity is a useful method for constructing multiple-item scales where each scale represents a dimension of a highly abstract concept. By helping to identify the most powerful indicators of a concept, factor analysis contributed to increasing the validity of my research as suggested by Nachmias and Nachmias (2000).

Before running the factor analysis, a Keiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity was performed to test the appropriateness of the data for factor analysis (Garson, 1998; Tabachnick & Fidell, 2007). Although KMO statistics change between 0 and 1, a value close to 1 showed that patterns of correlations were relatively compact; therefore, factor analysis should produce distinct and reliable factors (Field, 2005). According to Keiser (1974), values greater than .5 are considered as acceptable and values greater than .8 are considered to be great for the analysis.

As shown in Table 34, the KMO value for organizational commitment variables in my study was .876 which fell into the great range indicating that factor

analysis was appropriate for these data. In addition, Bartlett's test was highly significant (sig. 0.000); therefore, factor analysis was appropriate for my study.

Table 34. KMO and Bartlett's Test for Organizational Commitment Variables

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.876
Bartlett's Test of Sphericity	Approx. Chi-Square	4447.884
	df	105
	Sig.	.000

Results of Factor Analysis for Organizational Commitment Variables

By utilizing Varimax with the Kaiser normalization method, an analysis of the principal components of organizational commitment scale items produced five factors; however, I retained only those items that had factor loadings greater than .30 in absolute value given that loadings equal to .30 or below are generally considered to be weak in representing a factor (Nachmias & Nachmias, 2000). In addition to Nachmias and Nachmias, a minimum factor of .30 was also proposed by Angle and Perry (1981), Fred, McCaul and Dodd (1989), and Nunnally and Bernstein (1994).

As displayed in Table 35, affective commitment for items 1 through 6 showed a range of loading from .320 to .771 with the exception of .061 for Item 2 that stated, "I really feel as if this organization's problems are my own." In addition, Item 2 did not load any higher on either continuance commitment (Factor 3) or normative commitment (Factor 2). Thus, results revealed that the null hypothesis could safely be rejected in that the variables in the correlation matrix were correlated.

Continuance commitment represented Factor 3 for items 7 through 13 and showed a range of loading from .327 to .822 with the exception of .165 for Item 7, .172 for Item 12, and .172 for Item 13. Item 7 stated, “It would be very hard for me to leave my organization right now, even if I wanted to,” while Item 12 stated that “One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.” Item 13 stated that “If I had not already put so much of myself into this organization, I might consider working elsewhere.” Items 7, 12, and 13 did not load any higher on either continuance commitment (Factor 3) or normative commitment (Factor 2).

Normative commitment represented Factor 2 for items 14 through 19 and showed a range of loading from .425 to .753. The results of the factor loadings indicated that all normative commitment items had a factor loading greater than .30.

As a result of the first factor analysis, items were added and deleted and a second test was devised (Tabachnick & Fidell, 2007). Before deleting an item based on the results of factor analysis, Cronbach’s alpha coefficient was recalculated. If reliability was below .70, the item was not deleted from further analysis (Garson, 1998). After another reliability test, results indicated that the reliability scores did not fall below .70. Since coefficient alphas of all remaining scales exceeded .70 and the factor loadings were smaller than .30 for Item 2 (AC2), Item 7 (CC1), Item 12 (CC6), and Item 13 (CC7), they were deleted from further analysis.

Table 35. Factor Analysis of Organizational Commitment Variables

	Rotated Component Matrix				
	Components				
	1	2	3	4	5
@1__AC1	.235	.293	-.129	.321	.117
@2__AC2	.344	.245	-.157	.061	.040
@3__AC3	-.015	.109	-.031	.837	.079
@4__AC4	.299	.170	-.142	.707	.046
@5__AC5	.241	.219	-.114	.320	-.007
@6__AC6	.259	.062	-.033	.771	-.038
@7__CC1	.252	.156	.165	.050	.144
@8__CC2	.240	.070	.327	.058	.206
@9__CC3	-.033	-.136	.776	-.074	-.009
@10__CC4	.024	.002	.855	-.042	.169
@11__CC5	-.024	.021	.822	-.078	.157
@12__CC6	.165	.120	.172	.045	.155
@13__CC7	.165	.120	.172	.045	.155
@14__NC1	.414	.425	-.245	.216	.071
@15__NC2	.039	.738	.103	-.017	-.050
@16__NC3	.261	.753	-.074	.089	.089
@17__NC4	.343	.560	-.119	.249	.197
@18__NC5	.276	.718	-.070	.137	.151
@19__NC6	.447	.484	-.047	.304	.120

Note: AC = Affective Commitment

CC = Continuance Commitment

NC = Normative Commitment

After deletion of four items, the factor analysis yielded a 3-factor solution as expected. Factor loading for the retained items are presented in Table 36.

Table 36. Factor Loadings for the Retained Commitment Items

	Components		
	1	2	3
@1__AC1		.468	
@3__AC3		.758	
@4__AC4		.741	
@5__AC5		.473	
@6__AC6		.794	
@8__CC2			.431
@9__CC3			.752
@10__CC4			.877
@11__CC5			.836
@14__NC1	.599		
@15__NC2	.611		
@16__NC3	.784		
@17__NC4	.682		
@18__NC5	.773		
@19__NC6	.649		

As presented in Table 37, the eigenvalues were associated with each linear factor both before and after extraction and after rotation. Before extraction, results yielded 15 linear components or factors within the dataset. The eigenvalues associated with each factor indicated that the variance explained by that particular component also showed the eigenvalue in terms of the explained percentage of variance (Field, 2005). For example, if a factor had a low eigenvalue, then it contributed little to the explanation of variances and might be ignored as redundant with more important factors. In conducting an analysis of organizational commitment variables, 15 factors would be needed to explain 100% of the variance in the data. However, using the conventional criterion of stopping when the initial eigenvalue dropped below 1.0

(Garson, 1998), only 3 out of the 15 factors were actually extracted in this analysis that accounted for approximately 57% of the variance in the data. Referring to Table 37, the rotation Factor 1 accounted for 33% of the variance, Factor 2 accounted for 15%, and Factor 3 accounted for 9% of the variance in the data. However, after the rotation Factor 1 accounted for 25% of the variance, Factor 2 accounted for 18%, and Factor 3 accounted for 15% of the variance in the data. These three rotation factors cumulatively accounted for 57% of the total variance explained.

Table 37. Total Variance Explained for Organizational Commitment

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var.	Cum. %	Total	% of Var.	Cum.
1	4.945	32.967	32.967	4.945	32.967	32.967	3.691	24.608	24.608
2	2.252	15.016	47.982	2.252	15.016	47.982	2.625	17.498	42.106
3	1.402	9.345	57.328	1.402	9.345	57.328	2.283	15.221	57.328
4	.854	5.692	63.020						
5	.722	4.814	67.833						
6	.693	4.619	72.452						
7	.640	4.267	76.719						
8	.548	3.651	80.370						
9	.504	3.362	83.732						
10	.470	3.131	86.863						
11	.441	2.938	89.801						
12	.437	2.911	92.712						
13	.410	2.730	95.442						
14	.392	2.611	98.053						
15	.292	1.947	100.00						

Results of Factor Analysis for Job Satisfaction Variables

Three scales of the short form Minnesota Satisfaction Questionnaire (MSQ) consisted of the following items:

1. Intrinsic: 1, 2, 3, 4, 7, 8, 9, 10, 11, 15, 16, and 20
2. Extrinsic: 5, 6, 12, 13, 14, and 19
3. General Satisfaction: 17 (working conditions), 18 (coworkers), (+ Intrinsic Job Satisfaction), (+ Extrinsic Job Satisfaction).

As indicated in Table 38, the KMO value for job satisfaction variables was .929 which fell into the range of superb (Field, 2005), and Bartlett's test was highly significant (sig. .000). Therefore, these results revealed that factor analysis was appropriate for my data.

Table 38. KMO and Bartlett's Test for Job Satisfaction

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.929
Bartlett's Test of Sphericity	Approximate Chi-Square	8176.305
	df	190
	Sig.	.000

The factor loadings of job satisfaction variables indicated that intrinsic job satisfaction (Factor 1) showed a range of loading from .398 to .723 with the exceptions of .162 for Item JS15 and .222 for Item JS16. Item JS15 was related to "responsibility" that was identified as "the freedom to implement one's judgment," and Item JS16 was identified as "the opportunity to try one's own methods." Although items JS15 and JS16 did not load higher on extrinsic job satisfaction, Item JS15 loaded .770 and Item JS16 loaded .750 on Factor 3. On the other hand, extrinsic job satisfaction (Factor 2) showed a range of loading from .433 to .823 with the

exceptions of .218 for Item JS13 and .042 for Item JS14. Neither Item JS13 nor Item JS14 loaded higher on intrinsic job satisfaction. Thus, these intrinsic (JS15 and JS16) and extrinsic job satisfaction items (JS13 and JS14) were deleted and did not remain in the data for further analyses. From the two items specific to overall job satisfaction, JS17 (working conditions) loaded .396 and JS18 (coworkers) loaded .320 on Factor 3 (see Table 39).

Table 39. Factor Analysis of Job Satisfaction Variables

	Components		
(I) = Intrinsic, (E) = Extrinsic, (G) = General			
	1	2	3
JS9 (I)	.723		
JS10 (I)	.722		
JS11 (I)	.582		.384
JS4 (I)	.547		
JS7 (I)	.518		
JS3 (I)	.517		.484
JS1 (I)	.475		
JS12 (E)		.433	
JS6(E)		.823	
JS5(E)		.755	
JS18 (G)			.320
JS19 (E)		.539	.404
JS20 (I)	.453		.357
JS15 (I)	.162		.770
JS16 (I)	.222		.750
JS2 (I)	.446		.592
JS13 (E)		.218	
JS8 (I)	.398		
JS14 (E)		.042	.425
JS17 (G)			.396

After deleting four items, the factor analysis yielded a 2-factor solution as expected. Factor loading for the retained items are presented in Table 40. The two items specific to general job satisfaction, JS17 (working conditions) loaded .721, and

JS18 (coworkers) loaded .670 on extrinsic job satisfaction (Factor 2). Therefore, working conditions and coworkers were considered to be extrinsic job satisfaction variables while building an index.

Table 40. Factor Loadings for the Retained Items

Rotated Component Matrix		
	Components	
	1	2
@28__JS10 (I)	.743	.149
@28__JS9 (I)	.735	.043
@30__JS11 (I)	.682	.383
@22__JS3 (I)	.651	.223
@21__JS2 (I)	.614	.310
@23__JS4 (I)	.592	.253
@39__JS20 (I)	.556	.493
@26__JS7 (I)	.548	.292
@20__JS1 (I)	.478	.276
@27__JS8 (I)	.414	.320
@24__JS5 (E)	.260	.800
@25__JS6 (E)	.277	.751
@38__JS19 (E)	.301	.731
@36__JS17 (G)	.167	.721
@37__JS18 (G)	.208	.670
@31__JS12 (E)	.266	.530

Rotation Method: Varimax with Kaiser Normalization.

(I) = Intrinsic, (E) = Extrinsic, (G) = General

Before rotation, Factor 1 (intrinsic job satisfaction) accounted for 43% of the variance and Factor 2 (extrinsic job satisfaction) accounted for 8% of the variance as indicated in Table 41. While Factor 1 accounted for 27% of the variance after

rotation, Factor 2 accounted for 24% of the variance in the data. After rotation, however, these two factors accounted for approximately 51% of the variance.

Table 41. Total Variance Explained before Rotation for Job Satisfaction Factors

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var.	Cum. %	Total	% of Var	Cum. %	Total	% of Var.	Cum. %
1	6.801	42.508	42.508	6.801	42.508	42.508	4.303	26.894	26.894
2	1.317	8.232	50.740	1.317	8.232	50.740	3.815	23.845	50.740
3	.961	6.008	56.747						
4	.850	5.315	62.063						
5	.809	5.055	67.117						
6	.725	4.534	71.652						
7	.685	4.278	75.930						
8	.607	3.792	79.722						
9	.568	3.549	83.270						
10	.545	3.405	86.675						
11	.496	3.102	89.778						
12	.391	2.443	92.221						
13	.373	2.331	94.551						
14	.336	2.103	96.654						
15	.294	1.837	98.491						
16	.241	1.509	100.00						

Results of Factor Analysis for Job Characteristic Variables

As previously stated, the scores were calculated using a composite of two different Likert type scales adapted from Hackman and Oldham's (1975) Job Diagnostic Survey. In Section 1, a single item was provided for each job characteristic but two items were provided in Section 2, one of which was phrased in negative terms. As expected, the factor analysis resulted in a 5-factor solution accounting for 73% of the total shared variance. As indicated in Table 42, task identity accounted for 35% of the variance before rotation, and task significance, autonomy, skill variety, and job feedback accounted for 12%, 10%, 8% and 7%, respectively. However, after

extraction, task identity accounted for 15.2% of the variance while task significance, autonomy, skill variety, and job feedback accounted for 15.1%, 14.9%, 13.7% and 13.4, respectively.

Table 42. Total Variance Explained after Extraction of Job Characteristic Variables

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Factor	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	5.257	35.045	35.045	5.257	35.045	35.045	2.289	15.259	15.259
2	1.858	12.388	47.434	1.858	12.388	47.434	2.275	15.168	30.427
3	1.507	10.048	57.482	1.507	10.048	57.482	2.236	14.909	45.336
4	1.185	7.897	65.380	1.185	7.897	65.380	2.062	13.746	59.082
5	1.078	7.186	72.565	1.078	7.186	72.565	2.022	13.483	72.565
6	.661	4.408	76.973						
7	.519	3.460	80.433						
8	.489	3.259	83.692						
9	.455	3.033	86.726						
10	.387	2.581	89.307						
11	.365	2.435	91.742						
12	.348	2.323	94.065						
13	.317	2.116	96.181						
14	.310	2.066	98.247						
15	.263	1.753	100.00						

Extraction Method: Principal Component Analysis

As indicated in Table 43, all five job characteristics scales succeeded to load as an independent factor. Furthermore, all items showed high loadings on their factors. Analysis revealed that task identity items loaded strongly on Factor 1 (.871, .862, and .794), and all task significance items loaded strongly on Factor 2 (.833, .826, and .780). Three autonomy items loaded strongly on Factor 3 (.814, .809, and

.806), and all skill variety items loaded strongly on Factor 4 (.830, .780, and .712). Finally, all job feedback items loaded strongly on Factor 5 (.793, .792, and .695).

Table 43. Factor Analysis of Job Characteristic Variables

	Components				
	1	2	3	4	5
@46__JCMB2_2	.871	.070	.112	.087	.021
@51__JCMB2_7	.862	.132	.161	.078	.119
@41__JCMB1_2	.794	.038	.071	.174	.074
@43__JCMB1_4	.093	.833	.126	.135	.132
@49__JCMB2_5	.061	.826	.136	.167	.169
@54__JCMB2_10	.090	.780	.044	.213	.189
@53__JCMB2_9	.217	.096	.814	.075	.118
@40__JCMB1_1	.104	.076	.809	.198	.179
@50__JCMB2_6	.044	.126	.806	.118	.125
@48__JCMB2_4	.105	.213	.045	.830	.018
@42__JCMB1_3	.183	.112	.260	.780	.166
@45__JCMB2_1	.117	.257	.174	.712	.302
@47__JCMB2_3	.083	.207	.127	.036	.793
@52__JCMB2_8	.047	.069	.087	.164	.792
@44__JCMB1_5	.096	.256	.261	.185	.695

Factor 1 = Task Identity; Factor 2 = Task Significance; Factor 3 = Autonomy; Factor 4 = Skill Variety; Factor 5 = Job Feedback

The scree plot shown in Figure 3 also reveals a clear change in the slope of the line supporting a 5-factor solution.

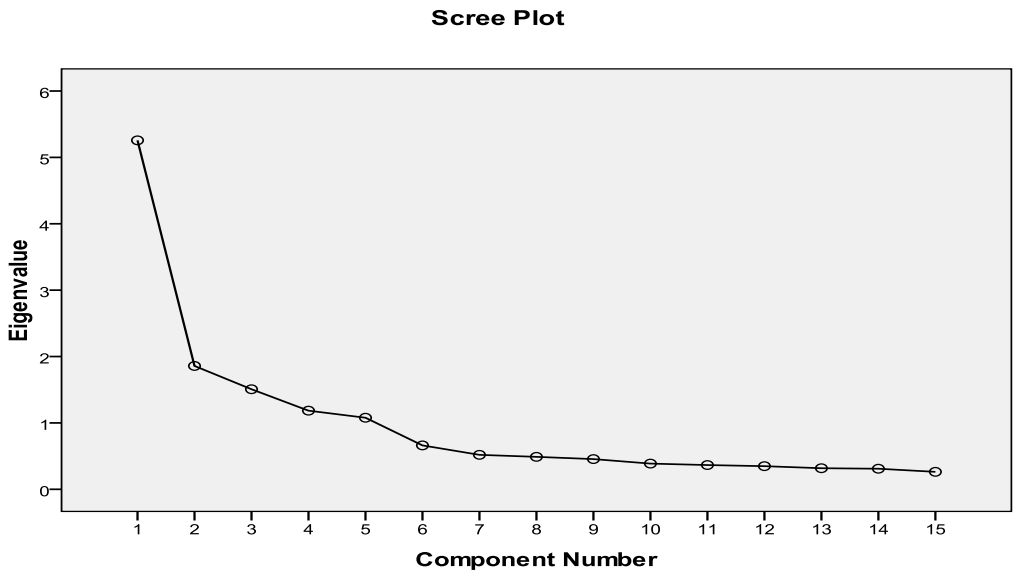

Figure 3. Plot for five job characteristics variables.

Results of Factor Analysis for Role Conflict and Role Ambiguity

Role conflict and role ambiguity were measured by using Rizzo et al.'s (1970) 14-item role conflict and role ambiguity scales. While the role conflict subscale consisted of 8 items, the role ambiguity subscale consisted of 6 items. As indicated in Table 44, the KMO value for role conflict and role ambiguity items was .837 and Bartlett's test was highly significant (sig. .000). Thus, factor analysis was appropriate for these data.

Table 44. KMO and Bartlett's Test for Role Conflict and Role Ambiguity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	3819.631
	df	91
	Sig.	.000

As displayed in Table 45, after running the factor analysis, role ambiguity represented Factor 1 for items 69 through 74 and showed a range of loading from .542 to .767. In addition, role conflict represented Factor 2 for items 61 through 68 and showed a range of loading from .582 to .847. These results revealed that the null hypothesis in my study can safely be rejected since the variables in the correlation matrix are uncorrelated. In other words, role conflict and role ambiguity operated as separate constructs.

Table 45. Factor Analysis of Role Conflict and Role Ambiguity

	Component		
	1	2	3
@61__RC_1	-.069	.582	.308
@62__RC_2	.176	.472	.203
@63__RC_3	.015	.869	.192
@64__RC_4	.109	.847	.218
@65__RC_5	-.149	.500	.146
@66__RC_6	.128	.751	.083
@67__RC_7	.173	.736	.238
@68__RC_8	.261	.669	.094
@69__RA_1	.644	-.160	.120
@70__RA_2	.743	-.034	-.023
@71__RA_3	.739	.165	.094
@72__RA_4	.542	.322	.026
@73__RA_5	.767	.026	-.047
@74__RA_6	.721	.272	.127

Before rotation, role ambiguity accounted for 31% of the variance while role conflict accounted for 18% as presented in Table 46. However, after extraction, role

ambiguity accounted for 26% of the variance while role conflict accounted for 22%. Thus, role ambiguity and role conflict accounted for 48% of the total shared variance.

Table 46. Total Variance Explained for Role Conflict and Role Ambiguity

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %	Total	% of Variance	Cum. %
1	4.282	30.588	30.588	4.282	30.588	30.588	3.599	25.710	25.710
2	2.464	17.601	48.189	2.464	17.601	48.189	3.147	22.479	48.189
3	.994	7.585	55.774						
4	.951	6.795	62.569						
5	.801	5.724	68.292						
6	.762	5.440	73.733						
7	.632	4.513	78.246						
8	.551	3.938	82.183						
9	.511	3.651	85.835						
10	.489	3.496	89.331						
11	.428	3.057	92.388						
12	.411	2.937	95.324						
13	.362	2.583	97.908						
14	.293	2.092	100.000						

Results of Factor Analysis for Role GNS and Role Overload

The results of the 6-item factor analysis of the GNS questionnaire are indicated in Table 47, and the results of the 5-item factor analysis of role overload are presented in Table 48. Factor analyses that emerged from both the 6-item GNS and the 5-item role overload questionnaires revealed an eigenvalue greater than 1.0. The factor for GNS explained 64% of the variance and the factor for role overload explained 70% of the variance. Because only one factor emerged for both

questionnaires and all items loaded high on the factor, removal of items was not applicable.

Table 47. Factor Matrix for Growth Need Strength

Stimulating and challenging work	.573
Changes to exercise independent thought and action in my job	.754
Opportunities to learn new things from my work	.895
Opportunities to be creative and imaginative in my work	.877
Opportunities for personal growth and development in my job.	.856
A sense of worthwhile accomplishment in my work	.805
Eigenvalue for the Growth Need Strength factor	3.84
Percent of variance explained by the commitment factor (one factor)	64.2

Table 48. Factor Matrix for Role Overload

How often does your job require you to work very fast?	.841
How often does your job require you to work very hard?	863
How often does your job leave you with little time to get things done?	.861
How often is there a great deal to be done?	.747
How often do you have to do more work than you can do well?	.867
Eigenvalue for the Growth Need Strength factor	3.50
Percent of variance explained by the commitment factor (one factor)	70.1

Bivariate Statistics: Correlation

Pearson's Product Moment *R* correlation was used to determine the nature and strength of the relationships among variables. Whereas correlation was used to measure the size and direction of the linear relationship between two study variables as a basis of multivariate calculations, bivariate correlation was limited to predict a score on one variable from a score on the other variable (Tabachnick & Fidell, 2007). Cohen (1988) described the strength of associations between variables (see Table 49).

Table 49. Strength of Correlation

Value of *r*	Description
- + .10 to - + .29	Small (weak)
- + .30 to - + .49	Medium (moderate)
- + .50 to - +1.0	Large (strong)

The Pearson bivariate correlations between organizational commitment variables and all other study variables are presented in Table 50. As shown, the results revealed that the following variables were significantly related to affective commitment: marital status (r = -.90, p < .01), number of children (r = .088, p < .05), management level or position (r = .076, p < .05), intrinsic job satisfaction (r = .461, p < .01), extrinsic job satisfaction (r =.412, p < .01), overall job satisfaction (r = .478, p < .01), skill variety (r =.233, p < .01), task identity (r = .164, p < .01), task significance (r = .311, p < .01), autonomy (r = .319, p < .01), job feedback (r = .278, p < .01), MPS (r =.346, p <. 01), role conflict (r = - .198, p < .01), role ambiguity (r = -.306, p < .01), and role overload (r = -.072, p < .05). Although marital status and role

related variables had a negative correlation with affective commitment, all other variables were positively related to affective commitment. However, the demographic variables of gender, tenure, and education were not significantly related to affective commitment.

With the exception of role conflict (r = .070, p < .05) that had a positive significant correlation to continuance commitment, the following variables had a negative correlation: education (r = -.138, p < .01), management level (r = -.156, p < .01), skill variety (r = -.075, p < .05), autonomy (r = -.117, p < .01), and MPS (r = -.117, p < .01). However, there was no significant correlation between continuance commitment and gender, tenure, marital status, number of children, job satisfaction, task identity, task significance, job feedback, role ambiguity, and role overload (cf., Table 50).

The last column indicated that the following variables were positively and significantly related to normative commitment: tenure (r = .082, p < .05), number of children (r = .146, p < .01), management level (r = .119, p < .01), intrinsic job satisfaction (r = .538, p < .01), extrinsic job satisfaction (r =.456, p < .01), overall job satisfaction (r = .530, p < .01), skill variety (r =.198, p < .01), task identity (r = .126, p < .01), task significance (r = .281, p < .01), autonomy (r = .317, p < .01), job feedback (r = .251, p < .01), and MPS (r =.326, p < .01). The correlation between normative commitment was also significant but in negative directions with marital status (r = -.109, p < .01), role conflict (r = -.175, p < .01), role ambiguity (r = -.300, p < .01), and role overload (r = -.070, p < .05). Demographic variables of gender and education were not significantly related to normative commitment (cf., Table 50).

Table 50. Summary of Pearson Product Moment Correlation Matrix

Variable	Affective	Direction/Strength	Continuance	Direction/Strength	Normative	Direction/Strength
Gender	.057	NSC	.030	NSC	.048	NSC
Tenure	.054	NSC	-.040	NSC	.082*	positive, weak
Education	-.029	NSC	-.138**	negative, weak	-.034	NSC
Marital status	-.090**	negative, weak	.025	NSC	-.109**	negative, weak
Children	.088*	positive, weak	-.064	NSC	.146**	positive, weak
Management level	.076*	positive, weak	-.156**	negative, weak	.119**	positive, weak
Intrinsic satisfaction	.461**	positive, moderate	-.020	NSC	.538**	positive, strong
Extrinsic satisfaction	.412**	positive, moderate	-.023	NSC	.456**	positive, moderate
General satisfaction	.478**	positive, moderate	-.033	NSC	.530**	positive, strong
Skill variety	.233**	positive, weak	-.075*	negative, weak	.198**	positive, weak
Task identity	.164**	positive, weak	-.042	NSC	.126**	positive, weak
Task significance	.311**	positive, moderate	-.042	NSC	.281**	positive, weak
Autonomy	.319**	positive, moderate	-.117**	negative, weak	.317**	positive, moderate
Job feedback	.278**	positive, weak	-.045	NSC	.251**	positive, weak
MPS	.346**	positive, moderate	-.117**	negative, weak	.326**	positive, moderate
Role conflict	-.198**	negative, weak	.070*	positive, weak	-.175**	negative, weak
Role ambiguity	-.306**	negative, moderate	-.017	NSC	-.300**	negative, moderate
Role overload	-.072*	negative, weak	-.017	NSC	-.070*	negative, weak

**Correlation is significant at the .01 level (2-tailed; *Correlation is significant at the .05 level (2-tailed).
NSC = No Significant Correlation

Results and Hypothesis Testing

The 18 hypotheses were tested using hierarchical regression analyses, Multivariate Analysis of Variance (MANOVA) through GLM, and SPSS Macro (mediation and moderation analyses).

Assumptions of Regression Analysis

The significance test for a multiple regression analysis features a number of assumptions that should be met or at least approximated to ensure reliable results. Five assumptions were associated with the use of regression: (a) ratio of cases to IVs, (b) absence of outliers among the IVs and on the DV, (c) absence of multicollinearity, (d) normality, linearity, homoscedasticity of residuals, and (e) independence of errors (Tabachnick & Fidell, 2007).

Ratio of Cases to IVs

When conducting regression, two simple rules that apply are $N \geq 50 + 8m$ (where m is the number of independent variables in a regression) for testing the multiple correlation and $N \geq 104 + m$ for testing individual predictors. In my study that consisted of 846 valid respondents and 18 independent variables, the number of cases was above the minimum requirement of 194 (50 + [8*18]) for the multiple correlation and 122 (104 + 18) for testing individual variables (Tabachnick & Fidell, 2007). Thus, the ratio of cases to IVs assumption was met.

Absence of Outliers

An outlier is a case score that has an extreme value on one variable (a univariate outlier) or a strange combination of scores on two or more variables (multivariate outlier) that impact the outcome of any statistical analysis. Outliers are

found in univariate as well as multivariate situations among both dichotomous and continuous variables, both independent and dependent variables, and in both data and the analyses results. According to Garson (1998), the dataset must be checked for both univariate and multivariate outliers in order to avoid biased results in a regression analysis.

Among the continuous variables, univariate outliers included cases that had very large standardized scores (*z* scores) on one or more variables that were disconnected from the other *z* scores. Cases with standardized scores in excess of 3.29 ($p < .001$, two-tailed test) are potential outliers according to Tabachnick and Fidell (2007). After I ran SPSS descriptives to check univariate outliers for continuous variables and saved their *z* scores in the data, there were no univariate outliers found to have extremely large values ($z > 3.29$).

Mahalanobis Distance is a very common measure to detect multivariate outliers. According to Garson (1998), cases with the highest Mahalanobis chi-square ($\chi^{2)}$ values are the most likely candidates to be considered outliers. Mahalanobis distances were calculated in my study by using chi-square criteria at $p < .001$ (Tabachnick & Fidell, 2007) and $df = 12$. Twenty cases were identified and determined to be multivariate outliers having a Mahalanobis Distance value greater than the critical value at $p < .001$. Of note, however, Mahalanobis Distance is not always a perfect indicator of multivariate outliers and should thus be used with caution. Mahalanobis Distance is tempered by the patterns of variances and covariances among the variables that give lower weight to variables with large variances and to groups of highly correlated variables. According to Tabachnick and Fidell, (2007), Mahalanobis Distance can either “mask” a real outlier (produce a false

negative) or “swamp” a normal case (produce a false positive) under some conditions. Therefore, Cook’s Distance was employed as another statistical measure to detect multivariate outliers in my study. Multivariate outliers are defined as cases that have a Cook’s Distance greater than the cutoff 1 (Garson, 1998; Tabachnick & Fidell, 2007). Stevens (2002) argued that “if a point a significant outlier on *y*, but its Cook’s Distance is < 1, there is no real need to delete the point because it does not have a large effect on the regression analysis” (p. 135). When Cook’s Distance was computed through SPSS for each regression, the calculation indicated that there were no values greater than one which meant that no cases had an unusual combination of values on the variables that would result in being designated as outliers. Although 20 cases were identified as multivariate outliers based on Mahalanobis distance, they were not deleted from the data since their Cook’s Distance was not greater than one (Stevens, 2002).

Absence of Multicollinearity

Multicollinearity is a condition in which independent variables are very highly correlated (.80 or greater). In general, such a high correlation would cause problems when trying to draw inferences regarding the relative contribution of each independent variable to the success of the model (Garson, 1998). As Tabachnick and Fidell (2007) pointed out, when independent variables are highly correlated with each other, this situation can cause logical and statistical difficulties. Thus, if a researcher is conducting a structure analysis, it may be a good idea to include redundant variables in the same analysis. Otherwise, multicollinearity creates logical problems that may occur because redundant variables are not needed, and since they increase the size of error terms, they can weaken the analysis. In addition to the logical

problem, multicollinearity can cause statistical problems at much higher correlations in that the condition renders unstable matrix inversion as well as unstable estimation of weighing coefficients (Tabachnick & Fidell, 2007).

According to O'Sullivan et al. (2003), multicollinearity can be detected by computing two related indices: (a) tolerance and (b) variance inflation factor (VIF). Tolerance can be defined as 1- R^2, where R^2 is the multiple R of a given independent variable regressed on all other independent variables. If the tolerance is < .20, the dependent variable should be omitted from the analysis due to multicollinearity. This is a better way than simply checking if r > .80 since tolerance considers the independent variable in relation to all other independent ones and thus takes interaction into account as well as simple correlations. As mentioned earlier, VIF is the variance inflation factor or the reciprocal of tolerance. Therefore, when VIF is high, there is multicollinearity and instability of the *b* and beta coefficients. As a rule of thumb, VIF > 4.0 exists when multicollinearity is a problem. *Collinearity Diagnostics* gives the VIF and tolerance values in SPSS (Garson, 1998).

As shown in Table 51, a review of the tolerance and VIF values revealed that there was the problem of multicollinearity with some predictors in my study. For example, the tolerance statistics were less than .2, and VIF values were greater than 4 for intrinsic satisfaction (tolerance = .167, VIF = 5.978), extrinsic satisfaction (tolerance = .153, VIF = 6.541), overall satisfaction (tolerance = .0.60, VIF = 16.780), and MPS (tolerance = .120, VIF = 8.314).

Table 51. Collinearity Diagnostics

Variables	Tolerance	VIF
Marital status	.620	1.613
Children	.501	1.996
Tenure	.245	3.079
Education	.903	1.108
Skill variety	.608	1.645
Task identity	.638	1.568
Task significance	.636	1.572
Autonomy	.252	3.966
Job feedback	.371	2.697
MPS	.120	8.314
Role conflict	.747	1.339
Role ambiguity	.663	1.508
Role overload	.799	1.252
Intrinsic satisfaction	.167	5.978
Extrinsic satisfaction	.153	6.541
Overall satisfaction	.060	16.780

When a correlation coefficient between two independent variables is high, the rule of thumb is to compare the IV's correlation coefficients with the DV and drop the IV that has a smaller coefficient with the DV. Based on this statement and bivariate correlation between the independent variables, general or overall job satisfaction (r > .80) and MPS (r > .80) were dropped from the regression analyses (see Table 52).

Table 52. Bivariate Pearson Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Marital status	1																		
Education	.017	1																	
Children	-.574**	-.092**	1																
Tenure	-.510**	-.094**	.616**	1															
Skill variety	-.157**	-.012	.162**	.188**	1														
Task identity	-.175**	.010	.180**	.182**	.332**	1													
T. significance	-.158**	-.022	.149**	.144**	.467**	.237**	1												
Autonomy	-.136**	.135**	.135**	.164**	.391**	.260**	.295**	1											
Job feedback	-.119**	-.033	.102**	.134**	.420**	.231**	.445**	.397**	1										
MPS	-.161**	.052	.143**	.176**	.570**	.473**	.497**	.801**	.713**	1									
Role conflict	.061	.066	-.084*	-.070*	-.075*	-.062	-.088*	-.245**	-.192**	-.237**	1								
Role ambiguity	.122**	.140**	-.136**	-.158**	-.295**	-.300**	-.364**	-.296**	-.383**	-.439**	.284**	1							
Role overload	.069*	.011	-.037	-.049	.005	-.033	.038	-.123**	-.074*	-.070*	.371**	.164**	1						
Int. satisfaction	-.099**	.006	.105**	.057	.262**	.204**	.295**	.420**	.352**	.451**	-.205**	-.352**	-.171**	1					
Ext. satisfaction	-.110**	.003	.088*	.076*	.296**	.173**	.281**	.520**	.395**	.523**	-.385**	-.406**	-.297**	.595**	1				
Gen. satisfaction	-.133**	-.008	.141**	.091**	.351**	.242**	.347**	.559**	.427**	.576**	-.327**	-.442**	-.253**	.858**	.867**	1			
AC	-.090**	-.029	.088*	.024	.233**	.164**	.311**	.318**	.278**	.346**	-.198**	-.306**	-.072*	.434**	.384**	.478**	1		
CC	.025	-.138**	-.064	-.046	-.075*	-.042	-.042	-.114**	-.045	-.117**	.070*	-.017	-.017	.007	-.031	-.033	-.051	1	
NC	-.109**	-.034	.146**	.069*	.198**	.126**	.281**	.295**	.251**	.326**	-.175**	-.300**	-.070*	.498**	.424**	.530**	.570**	-.001	1

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

Normality, Linearity, and Homoscedasticity of Residuals

Normality. When inference is a goal, checking continuous variables for normality is particularly important in any multivariate analysis. In the normality assumption of regression, researchers take for granted that residuals will be normally distributed and consist of constant variables over sets of independent variable values. If the residuals are not normal, then the standard errors of the regression coefficients are biased. Even in a situation where normality is not required, its existence makes for a stronger assessment. Although univariate normality needs to be checked, this does not guarantee multivariate normality. Therefore, multivariate normality should also be checked for further analyses (Tabachnick & Fidell, 2007).

Normality of variables can be checked by either statistical or graphical methods. As a general rule of thumb, a test for normality is to run descriptive statistics for variables in order to produce skewness and kurtosis values (two components of normality) and then divide these statistics by the standard errors. According to Garson (1998), kurtosis and skewness should be within the +2 to -2 range when data are normally distributed.

By dividing the skewness value by the standard error for skewness resulted in a *z* score for skewness, and by dividing the kurtosis value by the standard error for kurtosis gave a *z* score for kurtosis in my study. As shown in Table 53, several *z* scores exceeded the +2− -2 range that indicated a possible normality problem. However, Tabachnick and Fidell (2007) argued that the larger the sample size used, the more likely it is that a researcher will have violations of skewness and/or kurtosis with small deviations. In a large sample, however, a variable with statistically

significant skewness does not often deviate enough from normality to make a real difference in the analysis. In other words, the significance level of skewness is not as important as its actual size and visual appearance of the distribution with a large sample (e.g., $N > 100$, $N = 846$). In addition, the impact of departure in a large sample from zero kurtosis also diminishes. Therefore, Tabachnick and Fidell (2007) argued that skewness and/or kurtosis coefficients can be tolerated in large samples. Scholars (Garson, 1998; Tabachnick & Fidell, 2007) concluded that if the residual plots look normal, there is no reason to test the individual variables for normality.

Table 53. Skewness and Kurtosis Values

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Children	.650	.084	.744	.168
Tenure	.116	.084	-.116	.168
Skill_variety	-.517	.084	-.127	.168
Task_identity	-.274	.084	-.735	.168
Task_significance	-1.188	.084	1.181	.168
Autonomy	.023	.084	-.749	.168
Job_Feedback	-.399	.084	-.013	.168
Role_Conflict	-.321	.084	.056	.168
Role_Ambiguity	.664	.084	.569	.168
Role_Overload	.207	.084	-.931	.168
Intrinsic_Factorsonrasi	-.841	.084	.700	.168
Extrinsic_Factorsonrasi	-.407	.084	-.577	.168
Affective_Commitment	-.728	.084	.054	.168
Continuance_Commitment	-.408	.084	-.600	.168
Normative_Commitment	-.684	.084	.024	.168
Valid *N* (listwise)	846			

Linearity. Linearity assumes that there is a straight-line relationship between two variables. The linearity assumption is important given that regression only tests for a linear relationship between independent variables and the dependent variable. Any nonlinear relationship between the independent and dependent variables are ignored. In other words, the results of the regression analysis will underestimate the true relationship if the association between IVs and the DV is nonlinear (Mertler & Vannatta, 2005). Similar to normality, linearity can also be examined in the residual plots. If nonlinearity is detected in the data, for example, the researcher must check the univariate scatterplots to determine which individual *XY* association is nonlinear (Jason & Waters, 2002).

Homoscedasticity. Homoscedasticity indicates that the variability in scores for one continuous variable is approximately the same at all values of another continuous variable. Violating this assumption does not bias the regression coefficient but rather violates the standard error; therefore, significance levels are incorrect. Homoscedasticity is related to the assumption of normality because when the assumption of multivariate normality is met, the relationship between variables is homoscedastic. Heteroscedasticity or the failure of homoscedasticity is caused by either nonnormality of one of the variables or by the fact that one variable is related to a certain transformation of the other (Tabachnick & Fidell, 2007).

Testing the Assumptions of Normality, Linearity, and Homoscedasticity

The SPSS produces the plots in the regression program where both predicted errors and prediction scores are standardized. For the assumption of normality, linearity and homoscedasticity, the researcher should therefore focus on the overall shape of scatterplot. If all assumptions are met, the residuals will be nearly

rectangularly distributed with a concentration of scores along the center (Tabachnick & Fidell, 2007; Garson, 1998). In my study, normal P-P Plots were used to detect the violation of normality assumptions. As shown below, Figures 4, 6, and 8 indicated that the assumption of normality was not violated in my study because the data points were found to cluster around a straight line that revealed the data were from normal distribution for all three dependent variables. Tabachnick and Fidell (2007) argued that when the actual values line up and the diagonal goes from lower left to upper right (i.e., Figures 4, 6, and 8), the residuals are normally distributed.

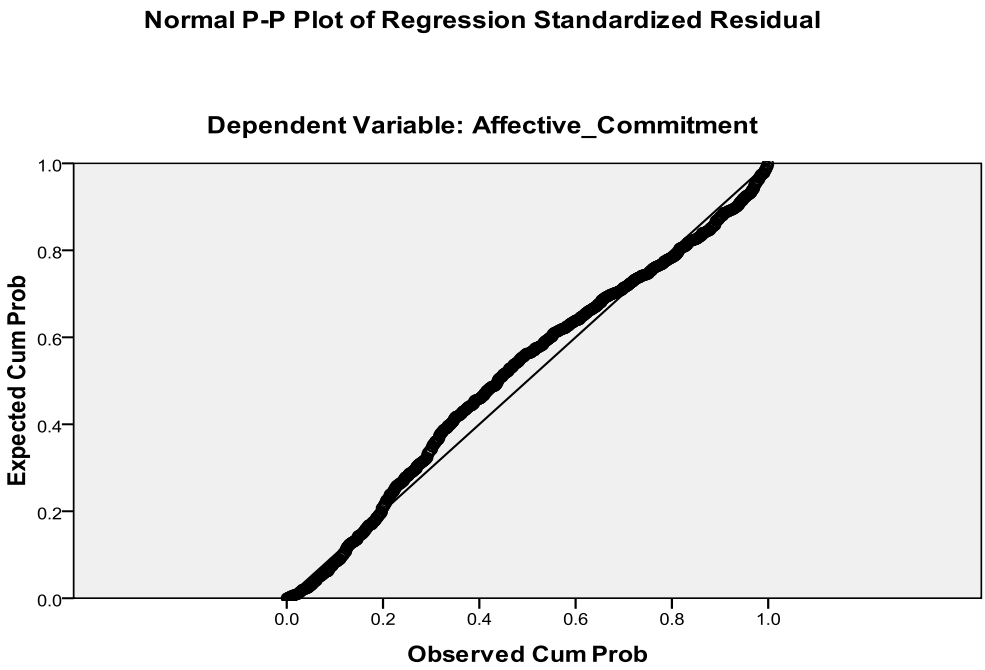

Figure 4. P-P Plot of regression standardized residual for affective commitment.

The homoscedasticity assumption can be checked by plotting the standardized residual scores. A scatter plot of the standardized predicted variable (ZPRED in SPSS) by the standardized residuals (ZPRESID in SPSS) should show a random pattern across the entire range of ZPRED when regression errors occur in

homoscedasticity−that is, when the regression model was equally accurate across the range of the dependent variable (Garson, 1998). In addition, Tabachnick and Fidell (2007) argued that in homoscedasticity violation, the scattered plot indicates a funnel shape of data points. Typically, heteroscedasticity is a case in which the band becomes wider at larger predicted values and the linearity of relationship between predicted DV scores and errors of prediction is also assumed. For example, if nonlinearity is present, the overall shape of the scatter plot is curved rather than rectangular. Thus, Figures 5, 7, and 9 indicate that the assumption of linearity and homoscedasticity were not violated in my study.

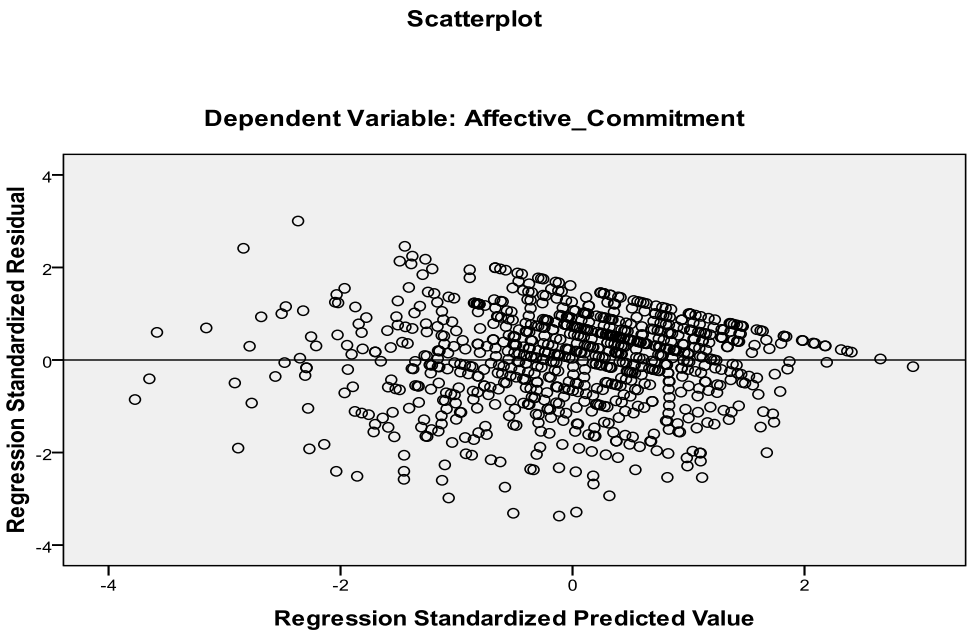

Figure 5. Scatter plot describing the relationship between standardized predicted and residual affective commitment scores.

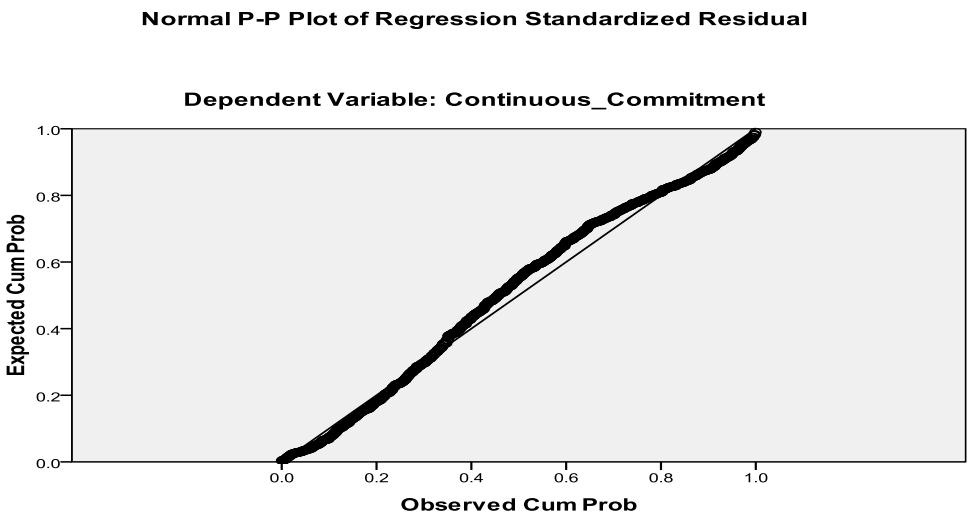

Figure 6. P-P Plot of regression standardized residual for continuance commitment.

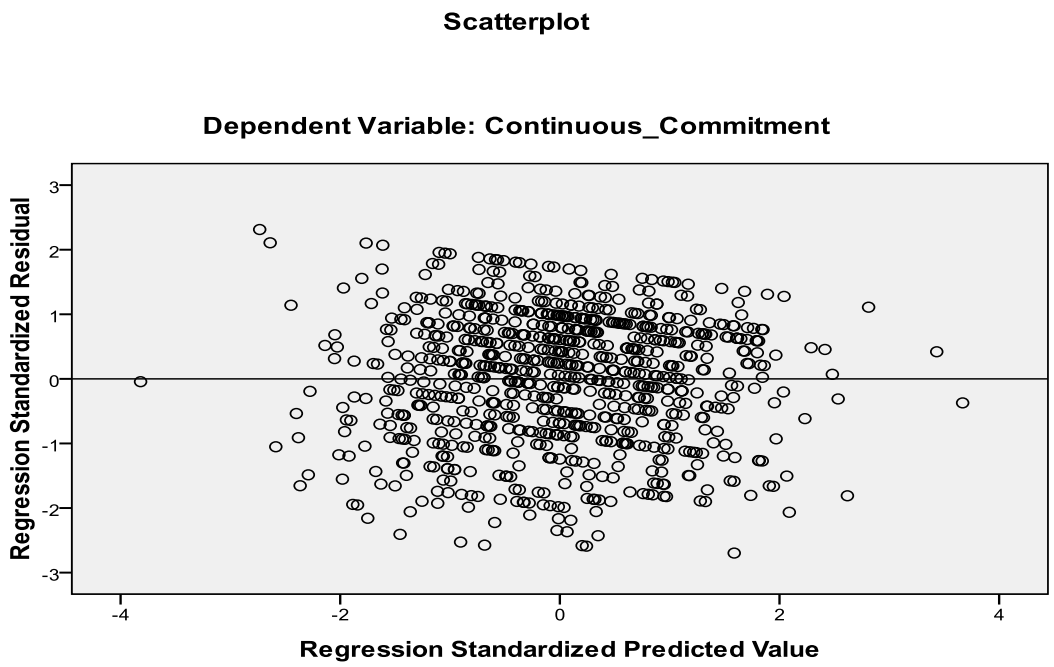

Figure 7. Scatter plot describing the relationship between standardized predicted and residual continuance commitment scores.

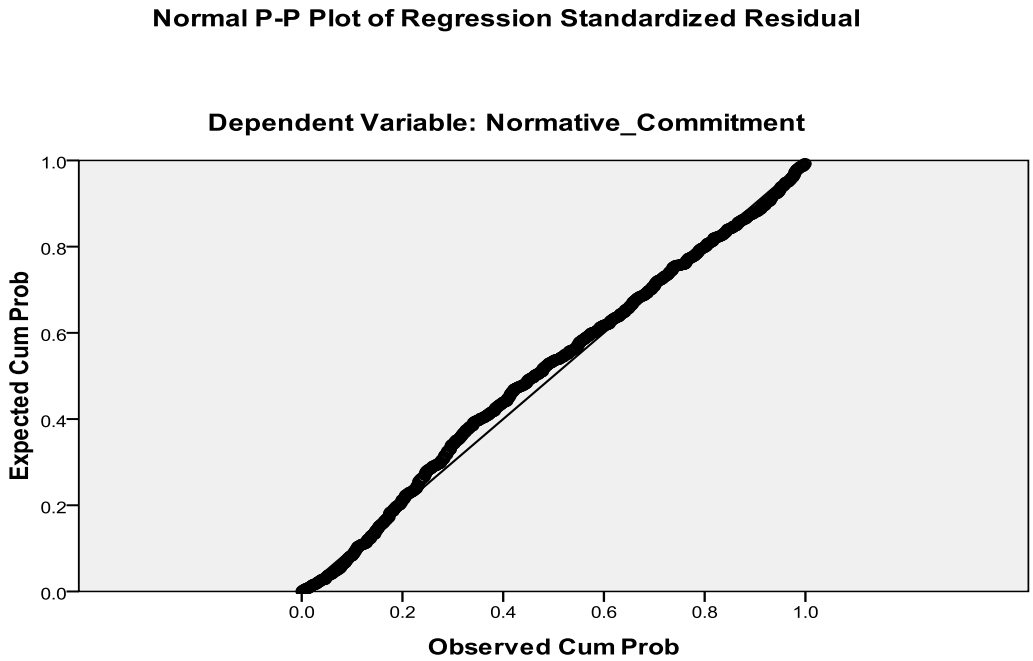

Figure 8. P-P Plot of regression standardized residual for normative commitment.

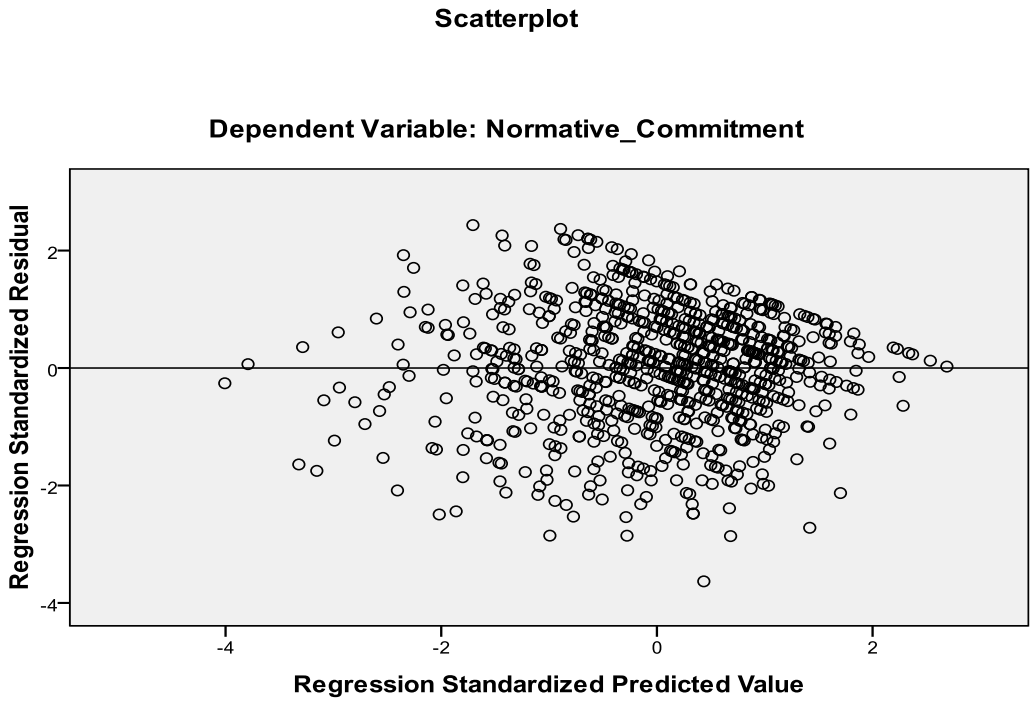

Figure 9. Scatter plot describing the relationship between standardized predicted and residual normative commitment scores.

Thus, scatter plots and Normal P-P Plots enabled checking three assumptions at the same time. The residual plots of standardized residuals versus predicted values (cf., Figures from 4 to 9) indicated that assumptions of normality, linearity and homoscedasticity were met for the data in my study.

Independence of Errors

In the final assumption of regression, errors of prediction were independent of one another. In other words, the residual for the first subject was not related to the residual for the second subject that is generally violated with time-series and distance measures (Tabachnick & Fidell, 2007). Independent observations were assumed by multiple regressions, and independence of errors was tested by the Durbin-Watson coefficient that used studentized residuals. According to Garson (1998), the Durbin-Watson statistic ranges from zero to four; however, it should range between 1.5 and 2.5 for independent observations since a statistic close to 4 is a strong negative correlation that results in a loss of power. On the other hand, values close to zero indicate that successive residuals are positively correlated. Positive autocorrelation makes estimates of error variance too small and increases Type I errors (Tabachnick & Fidell, 2007). As shown in Table 54, the results revealed that there was no positive or negative autocorrelation detected among residuals in the three separate initial regressions of my study.

Table 54. Independence of Error Statistics by the Durbin-Watson Coefficient

Durbin-Watson Coefficient		
Affective Commitment	Continuance Commitment	Normative Commitment
1.895	1.967	1.968

Hierarchical Multiple Regression

Hypotheses 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 were tested by hierarchical regression in which age and working units were controlled since they might have impacted the dependent variables beyond the independent variables.

Regression analyses could have been used with either continuous or dichotomous independent variables. For example, independent variables that were discrete could be used after they were converted into dichotomous variables by dummy variable coding with 1s and 0s. Marital status was included in my analysis as a dummy variable (0 = single, 1 = married). Although education was ordinal, it was included because there was a sequential increase between intervals (Tabachnick & Fidell, 2007). The discrete working unit variable was used in the regression analysis after it was converted into a dummy variable. For example, judicial and preventive, traffic, and crime investigation units were recoded as 1, and human resources, logistics, international affairs, internal investigation, and other units were recoded as 0. Tenure, age, and children were included as continuous variables. Additionally, other independent variables and the dependent variable were already created as a scale and included in the analyses as continuous variables.

A separate regression analysis was computed for affective, continuance, and normative commitment. The initial variables were entered into the hierarchical regression that included two demographic variables of age and working unit which were input as control variables. This allowed me to control for effects of both demographic variables while checking the variance explained by the independent variables. Affective commitment was entered as the dependent variable. Together with control variables, the second set of variables included tenure, marital status,

number of children, education, skill variety, task identity, task significance, autonomy, job feedback, role conflict, role ambiguity, role overload, intrinsic job satisfaction, and extrinsic job satisfaction.

Regression Results for Affective Commitment

The regression results for affective commitment are presented in Tables 55, 56, and 57. Table 55 provided by SPSS is a summary of the model that displays *R*, R^2, adjusted R^2, and the standard error. The correlation coefficient *R* (multiple *R*) takes values -1 to +1. The relationship between the dependent and independent variables was represented by *R* that indicated the strength between the IVs and DV. The coefficient of determination was R^2 that represented the explanatory power of the model which showed how much of the variance (change) in the DV could be explained by the IVs (Tabachnick & Fidell, 2007). An R_1^2 value of .003 for the initial model without IVs indicated that .3% of the variance in affective commitment could be accounted for by two control variables. In the second model, the R_2^2 value of .266 indicated that approximately 27% of the variance in affective commitment could be explained by the IVs included in my study.

Table 55. Model Summary for Affective Commitment

Model	*R*	R^2	Adjusted R^2	Std. Estimate Error
1	.058	.003	.001	1.32920
2	.515	.266	.252	1.15053

As reported in Table 56, the analysis of variance revealed whether or not the overall model was statistically significant in which the significant value was the

probability of the model. The most important part of this table was the *F*-ratio (Garson, 1998) of 1.438 for the initial model that was very likely to have happened by chance. In other words, *F* statistics of 1.439 were not statistically significant at the .05 level for the first model that contained only the control variables of age and unit. After controlling the demographic variables of age and working unit, the overall model was significant ($F = 18.750$, $p < .05$).

Table 56. ANOVA for the Dependent Variable of Affective Commitment

Model		Sum of Squares	*df*	Mean Square	*F*	Sig.
1	Regression	5.084	2	2.542	1.439	.238
	Residual	1489.397	843	1.767		
	Total	1494.481	845			
2	Regression	397.121	16	24.820	18.750	.000
	Residual	1097.360	829	1.324		
	Total	1494.481	845			

Although the ANOVA for affective commitment provided information regarding the overall model, the table did not reveal the individual contribution of variables in the model. In the regression analysis, the model took the form of an equation that contained a coefficient for each predictor.

Column “B” as depicted in Table 57 indicates the values for the regression coefficients that were referred to as unstandardized coefficients because they were measured in their natural units. Although unstandardized regression coefficients measured the strength and direction of the association between the IVs and affective commitment, because they are unstandardized, it was difficult to make quick comparisons (Garson, 1998). Based on standard values derived from IVs and the DV,

beta weights (ß) were standardized regression coefficients. Therefore, beta weights were helpful because they provided a standardized coefficient. Beta values were all measured in standard deviation units and were therefore directly comparable which provided better insight into the importance of a predictor in the model (Tabachnick & Fidell, 2007).

Table 57. Regression Coefficients for Affective Commitment

		B	Std. Error	Beta	*t*	Sig.
1	(Constant)	4.981	.123		40.336	.000
	Unit	.066	.098	.024	.673	.501
	Age	-.014	.008	-.059	-1.669	.096
2	(Constant)	3.658	.632		5.785	.000
	Unit	.056	.087	.020	.645	.519
	Age	-.018	.014	-.077	-1.333	.183
	Marital status	-.095	.122	-.030	-.780	.435
	Education	-.049	.054	-.029	-.918	.359
	Number of children	.038	.048	.033	.802	.423
	Tenure	.036	.014	.151	2.520	.012
	Skill variety	.007	.035	.007	.197	.844
	Task identity	.013	.029	.015	.449	.654
	Task significance	.136	.037	.137	3.726	.000
	Autonomy	.069	.033	.080	2.079	.038
	Job feedback	.012	.038	.012	.317	.751
	Role conflict	-.077	.041	-.064	-1.871	.042
	Role ambiguity	-.098	.043	-.083	-2.271	.023
	Role overload	.052	.043	.040	1.210	.227
	Intrinsic satisfaction	.456	.069	.255	6.629	.000
	Extrinsic satisfaction	.139	.061	.098	2.261	.024

Note: $p < .05$

A review of regression coefficients revealed that role conflict (ß = -.064, t = -1.871, p = .042) and role ambiguity (ß = -.083, t = -2.271, p = .023) were inversely

related to affective commitment. A positive significant relationship existed between affective commitment and tenure (ß = .151, *t* = 2.520, p = .012), task significance (ß = .137, *t* = 3.726, *p* = .000), autonomy (ß = .80, *t* = 2.079, *p* = .038), intrinsic job satisfaction (ß = .255, *t* = 6.629, *p* = .000), and extrinsic job satisfaction (ß = .098, *t* = 2.261, *p* = .024). The beta weights suggested that both intrinsic and extrinsic job satisfaction were the largest contributors to the variance explained in affective commitment. However, no significant relationship existed between affective commitment and marital status, education, number of children, skill variety, task identity, job feedback, and role overload. In other words, these independent variables did not significantly contribute to the variance in affective commitment.

Regression Results for Continuance Commitment

The control variables that were entered first in the hierarchical regression did not explain (R_1^2 = .003) the significant amount of variance in continuance commitment (F_1 = 1.363, *p* = .256). However, the overall second model that contained IVs was statistically significant (*F*2 = 2.560, *p* = .001). As shown in Table 58, the 4.7% (R_2^2 = .047) in variance of continuance commitment could be explained by the linear combination of the study variables. After controlling for age and working unit, the relationship between continuance commitment and education (*t* = -3.662, *p* = .000), autonomy (*t* = -2.085, *p* = .037), and role conflict (*t* = 2.315, *p* = .021) were significant. While the relationship between continuance commitment and autonomy and education was in a negative direction, role conflict was positively related to continuance commitment. Education (ß = -.131) was the largest contributor to the variance explained in continuance commitment.

Table 58. Regression Coefficients for Continuance Commitment

Model		*B*	Std. Error	Beta	*t*
1	(Constant)	4.672	.127		36.702
	Unit	.120	.101	.042	1.186
	Age	.007	.009	.030	.852
2	(Constant)	6.143	.743		8.274
	Unit	.085	.103	.030	.833
	Age	-.012	.016	-.051	-.780
	Marital_status	-.111	.144	-.033	-.774
	Education	-.231	.063	-.131	-3.662*
	Number of children	-.087	.056	-.073	-1.545
	Tenure	.011	.017	.047	.683
	Skill_variety	-.045	.041	-.046	-1.102
	Task_identity	-.010	.034	-.011	-.297
	Task_significance	-.014	.043	-.013	-.315
	Autonomy	-.082	.039	-.091	-2.085*
	Job_feedback	-.014	.045	-.013	-.320
	Role_conflict	.112	.048	.091	2.315*
	Role_ambiguity	-.068	.051	-.055	-1.332
	Role_overload	-.057	.050	-.042	-1.123
	Intrinsic_satisfaction	.108	.081	.058	1.335
	Extrinsic_satisfaction	.016	.072	.011	.226

R_1^2 = .003, F_1 = 1.363; R_2^2 =.047, $F2$ = 2.560*, * $p < .05$

Regression Results for Normative Commitment

The regression results for normative commitment are shown in Table 59. The R_2^2 of .304 indicated that the model accounted for approximately 31% of the variance in normative commitment.

Table 59. Regression Coefficients for Normative Commitment

Model		*B*	Std. Error	Beta	*t*
1	(Constant)	4.902	.118		41.531
	Unit	.005	.094	.002	.057
	Age	-.019	.008	-.082	-2.327
2	(Constant)	2.649	.590		4.492
	Unit_Recoded	.015	.082	.006	.186
	Age	-.007	.013	-.032	-.565
	Marital_status	-.023	.114	-.008	-.204
	Education	-.038	.050	-.023	-.752
	Number of children	.108	.045	.099	2.431*
	Tenure	.017	.013	.077	1.311
	Skill_variety	-.017	.032	-.019	-.515
	Task_identity	-.024	.027	-.029	-.890
	Task_significance	.100	.034	.105	2.923*
	Autonomy	.024	.031	.029	.782
	Job_feedback	-.013	.036	-.013	-.374
	Role_conflict	-.027	.038	-.024	-.706
	Role_ambiguity	-.091	.040	-.081	-2.268*
	Role_overload	.070	.040	.057	1.761
	Intrinsic_satisfaction	.587	.064	.342	9.145*
	Extrinsic_satisfaction	.218	.057	.161	3.820*

R_1^2 = .007, F_1 = 2.824, R_2^2 =.304, $F2$ = 22.583*, *p < .05

While the initial model was not statistically significant (F = 2.824, p = .60), after entering the independent variables into the model, F statistics indicated that the overall model was significant (F = 22.583, p = .000). Number of children (t = 2.431, p = .015), task significance (t = 2.923, p = .004), role ambiguity (t = -2.268, p = .024), intrinsic satisfaction (t = 9.145, p = .000), and extrinsic satisfaction (t = 3.820, p = .000), all made significant contributions to the variance in normative commitment.

Number of children, task significance, intrinsic satisfaction, and extrinsic satisfaction were positively related to normative commitment, whereas role ambiguity was negatively related. Intrinsic satisfaction was found to be the most influential variable in predicting normative commitment (ß = .342).

Multivariate Analysis of Variance (MANOVA)

Hypotheses 3 and 18 were tested by using MANOVA through the General Linear Model (GLM). MANOVA was the most appropriate method for analyzing a single categorical independent variable (gender; management level) with two and three categories against three continuous dependent variables. The GLM Multivariate is based on the general linear model in which factors are assumed to have a linear relationship to the dependent variables (Field, 2005). Hypothesis 3 stated: "There is a significant difference between females and males in regard to affective, continuance, and normative commitment." Hypothesis 18 stated: "There is a significant difference between first and mid-level supervisors and police officers in regard to affective, continuance, and normative commitment." MANOVA tested whether any significant differences existed between groups on the demographic variables of gender and management level that could account for differences in the variables of affective, continuance, and normative commitment. Prior to testing, the assumption of multivariate normality, absence of outliers, homogeneity of variance, linearity, and absence of multicollinearity (Tabachnick & Fidell, 2007) were met for the data.

MANOVA Results for Management Level

The first step in the MANOVA process of analysis was the omnibus or overall *F* test. The *F* value answered the question: "Is the model significant for each dependent variable?" The null hypothesis that stated there was no difference in the

means of each dependent variable for the different groups formed by the management level of categories was tested by the *F*-test (Garson, 1998). In my study, the multivariate GLM was found to be significant for all three dependent variables. As revealed in Table 60, the management level of categories significantly differed for affective commitment ($F = 3.048$, $p < .05$), continuance commitment ($F = 10.545$, $p < .05$), and normative commitment ($F = 6.258$, $p < .05$).

Table 60. Tests of Between-Subjects Effects for Management Level

Source	Dependent Variables	Type III Sum of Squares	Mean Square	*F*	Sig.	Partial Eta Squared
Management level	Affective Commitment	10.731[a]	5.365	3.048	.048	.007
	Continuance Commitment	38.762[b]	19.381	10.545	.000	.024
	Normative Commitment	20.044[c]	10.022	6.258	.002	.015

a. $R^2 = .007$ (Adjusted $R^2 = .005$)

b. $R^2 = .024$ (Adjusted $R^2 = .022$)

c. $R^2 = .015$ (Adjusted $R^{2 =}$ .012)

The multivariate test answered the question: “Is each effect significant?” While the *F* test (tests of between-subjects effects) focused on the dependent variables, the multivariate test dealt with the independent variables (Garson, 1998). The four tests of significance for each model’s effect are displayed in Table 61. Similar to the *F*-test in univariate ANOVA, Wilks’ Lambda multivariate *F* test is the most commonly used when there are more than two groups formed by the independent variable. Wilks’ Lambda is a positive valued statistic that ranged from 0 to where

decreasing statistic values indicate effects that contribute more to the model. Each multivariate statistic is transformed into a test statistic with an approximate or exact *F* distribution (Tabachnick & Fidell, 2007). The significance value of the main effect, management level, was less than .05 (p = .000) indicating that the effects contributed to the model. Although management level contributed to the model, it did not contribute very much since the value of Pillai's trace was close to Hotelling's trace (Tabachnick & Fidell, 2007). In addition, a very small partial eta squared (.020) revealed that management level contributed little to the model.

Table 61. Multivariate Test Results for Management Level

	Value	*F*	Hypothesis *df*	Sig.	Partial Eta Squared
Pillai's Trace	.040	5.731	6.000	.000	.020
Wilks' Lambda	.960	5.776	6.000	.000	.020
Hotelling's Trace	.042	5.821	6.000	.000	.020
Roy's largest root	.040	11.282	3.000	.000	.039

Contrast estimate was used to test the results of the management level categories. Garson (1998) described contrast as the test of a hypothesis that relates the group means and makes a comparison between the means among some or all groups. The first contrast compared police officers to mid-level supervisors followed by the second contrast that compared first level supervisors to mid-level supervisors. Finally, the third contrast compared first level supervisors to police officers. As shown in Table 62, there was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level supervisors (p = .050, .000, .001) and between first level supervisors and police

officers (*p* = .049, .050, .036); however, the difference was not significant between first level supervisors and mid-level supervisors (*p* = .856, .064, .450).

Table 62. Contrast Results (K Matrix) for Management Level

		Dependent Variables		
Management Level	Simple Contrast	Affective	Continuance	Normative
	Contrast_Estimate	-.219	.528	-.357
Police officers vs.	Std. Error	.115	.117	.109
mid-level supervisors	Sig.	.050	.000	.001
	Contrast Estimate	.027	.281	-.107
First level vs.	Std. Error	.148	.152	.141
mid-level supervisors	Sig.	.856	.064	.450
	Contrast Estimate	.246	-.247	.250
First level supervisors	Std. Error	.125	.128	.119
vs. police officers	Sig.	.049	.050	.036

Contrast estimate results indicated that police officers reported low affective commitment (.219) and normative commitment (-.357) but higher continuance commitment (.528) when compared to mid-level supervisors. Contrast estimate results also indicated that first level supervisors had higher affective commitment (.246) and normative commitment (.250) but lower continuance commitment (-.247) to their organization when compared to police officers.

MANOVA Results for Gender

Hotelling's Trace test was used to test the significance of gender differences. While Wilks' Lambda is a very common test used to compare more than two groups, Hotelling's Trace is used when there are only two groups formed by the independent variable (Garson, 1998). Although Hotelling's Trace is always larger than Pillai's Trace when the eigenvalues of the test matrix are small, these two statistics are nearly equal thus indicating that the effect probably does not contribute much to the model (Tabachnick & Fidell, 2007). As shown in Table 63, the GLM (MANOVA) procedure using Hotelling's Trace did not indicate significant differences between females and males: Hotelling's Trace = .005, F = 1.316, p = .268; and effect size (Partial Eta Squared) = .005.

Table 63. Multivariate Test Results for Gender

Effect		Value	*F*	Sig.	Partial Eta Squared
Gender	Pillai's Trace	.005	1.316	.268	.005
	Wilks' Lambda	.995	1.316	.268	.005
	Hotelling's Trace	.005	1.316	.268	.005
	Roy's Largest Root	.005	1.316	.268	.005

The F statistics were used to determine the differences among the dependent variables and the independent variable of gender. As shown in Table 64, no significant difference was revealed between females and males for affective commitment (F = 2.759, p = .097), continuance commitment (F = .755, p = .385), and normative commitment (F = 1.981, p = .160).

Table 64. Tests of Between-Subject's Effects for Gender

Source	Dependent Variable	Type III Sum of Squares	Mean Square	*F*	Sig.	Partial Eta Squared
Gender	Affective Commitment	4.870[a]	4.870	2.759	.097	.003
	Continuance Commitment	1.420[b]	1.420	.755	.385	.001
	Normative Commitment	3.209[c]	3.209	1.981	.160	.002

a. R^2 = .003 (Adjusted R^2 = .002)
b. R^2 = .001 (Adjusted R^2 = .000)
c. R^2 = .002 (Adjusted R^2 = .001)

Although the difference between females and males for affective, continuance, and normative commitment were not significant, the contrast results reported in Table 65 indicated that females exhibited higher levels when compared to males of affective commitment (contrast estimate = .274), continuance commitment (contrast estimate = .148), and normative commitment (contrast estimate = .222).

Table 65. Contrast Results (K Matrix) for Gender

		Dependent Variables		
Gender	Simple Contrast	Affective Commitment	Continuance Commitment	Normative Commitment
Females vs. Males	Contrast Estimate	.274	.148	.222
	Std. Error	.165	.170	.158
	Sig.	.097	.385	.160

Mediator and Moderator Testing Results

Although mediators and moderators are different, they were used interchangeably in the literature. Bennett (2000) pointed out the importance of understanding whether a mediator or moderator effect is hypothesized since both require different statistical analysis. As illustrated in Figure 10, the moderator variable is an independent variable that affects the strength and/or direction of the relationship between another independent variable and a dependent variable. When the strength of the relationship is dependent upon a third variable, moderation is said to be occurring.

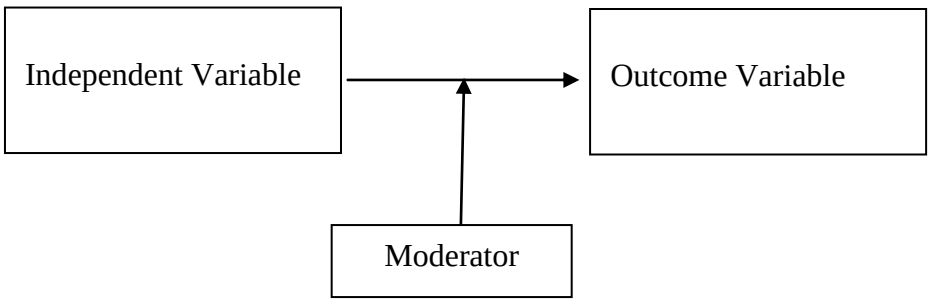

Figure 10. Statistical model of a moderator effect.

On the other hand, a mediator variable describes how the correlation occured between an independent variable and a dependent variable as illustrated in Figure 11. A mediator variable can be only tested when a significant direct effect existed between the independent variable and the dependent variable (Holmbeck, 1997).

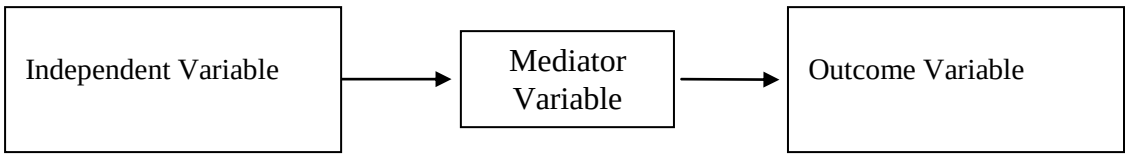

Figure 11. Statistical model of a mediator effect.

Mediation Analyses

The mediator hypothesis (H_{17}) was tested by using the SPSS macro with bootstrapping provided by Preacher and Hayes (2008). Hypothesis 17 stated: "Overall or general job satisfaction will mediate the relationship between the job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of the organizational commitment (affective, continuance, and normative)." Preacher and Hayes' (2008) SPSS macro tested whether or not overall job satisfaction was a mediator between the five job characteristics and the dependent variables of affective, continuance, and normative commitment.

Bootstrapping is a widely used statistical technique for assessing indirect effect (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004; Preacher, Rucker, & Hayes, 2007; Shrout & Bolger, 2002).

> Bootstrapping is one of several re-sampling strategies for estimation and hypothesis testing. In bootstrapping, the sample is conceptualized as a pseudo-population that represents the broader population from which the sample was derived, and the sampling distribution of any statistic can be generated by calculating the statistic of interest in multiple resamples of the data set. Using bootstrapping, no assumptions about the shape of the sampling distribution of the statistic are necessary when conducting inferential tests. (Preacher et al., 2007, p. 9)

Bias-corrected bootstrapping pointed out estimates for the indirect effects of the five job characteristics on affective, continuance, and normative commitment by calculating the mediator together with standard errors and 95% confidence intervals. An indirect effect was accepted as significant at alpha level .05 if its 95% confidence

interval did not contain zero. The analysis also gave regression coefficients for the casual steps approach and Sobel's (1982) test *(z)* results for the specific indirect effects. Sobel provided an approximate significance test for the indirect effect of the independent variable on the dependent variable via the mediator and estimated the total and direct effects of the causal variable on the dependent variable.

According to Tepper et al. (1996), if there is no direct relationship between the independent variable and the dependent variable then mediation is not possible. In other words, the presence of direct effects must be indicated before the search for indirect effects through a mediator can be justified. In addition, the independent variables must be significantly related to the mediator. The final condition is the mediator must be significantly related to the dependent variable.

The correlation among the variables is indicated in Table 66. As shown, affective commitment and normative commitment were significantly and positively related to skill variety, task identity, task significance, autonomy, and job feedback (IVs), and overall job satisfaction (mediator). Continuance commitment was significantly and negatively related to skill variety and autonomy whereas task identity, task significance, and job feedback were not significantly correlated with continuance commitment. Moreover, there was no significant correlation between overall job satisfaction (mediator) (r = -.029) and continuance commitment. Therefore, continuance commitment was not included in the bootstrapping analyses.

Separate mediation (bootstrapping) analyses were performed for five job characteristics variables. In the first analysis, skill variety was entered as the independent variable. While affective commitment was the dependent variable, overall job satisfaction was the mediator in this analysis. Next, SPSS macro was run

10 times for each independent and two dependent variables (affective and normative) in order to test the mediation effect of overall job satisfaction.

Table 66. Bivariate Correlations

1	Skill variety	1	2	3	4	5	6	7	8	9
2	Task identity	.332**	1							
3	Task sig.	.467**	.237**	1						
4	Autonomy	.391**	.260**	.295**	1					
5	Job feedback	.420**	.231**	.445**	.397**	1				
6	General satis.	.351**	.242**	.347**	.559**	.427**	1			
7	Affective	.233**	.164**	.311**	.318**	.278**	.478**	1		
8	Continuance	-.075*	-.042	-.042	-.114**	-.045	-.033	-.051	1	
9	Normative	.198**	.126**	.281**	.295**	.251**	.530**	.570**	-.001	1

**Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

Mediation Analysis Results for Affective Commitment

Bias corrected and accelerated confidence intervals displayed in Table 67 indicated that the true indirect effect of skill variety was estimated to lie between .1120 and .1880 for overall job satisfaction. These numbers suggested that the indirect effect of skill variety was significantly different from zero for overall job satisfaction at $p < .05$ (two tailed). In my study, there was a 95% confidence because zero was not within this interval and was not likely to be a value for the indirect effect of skill variety on effective commitment. Thus, overall job satisfaction was a mediator between skill variety and affective commitment. The results of the Sobel test confirmed that overall job satisfaction ($z = 8.6149$, $p < .05$) was a significant mediator between skill variety and affective commitment.

Table 67. Indirect Effects of Skill Variety on Affective Commitment

Dependent, Independent, and Mediator Variables:					
DV = Affective Commitment					
IV = Skill Variety					
MEDS = Overall Job Satisfaction					
R^2	Adj. R^2	*F*	*df*1	*df*2	*p*
.2332	.2313	128.1599	2.0000	843.0000	.0000
Indirect Effects of IV on DV by Mediators (ab paths)					
	Effect	*SE*	*Z*	*p*	
TOTAL	.1484	.0172	8.6149	.0000	
General_	.1484	.0172	8.6149	.0000	
Bias Corrected and Accelerated Confidence Intervals					
	Lower	Upper			
TOTAL	.1120	.1880			
General_	.1120	.1880			

Overall job satisfaction fully mediated the relationship between task identity and affective commitment (IE lower 95% CI = .0667; upper 95% CI = .1354) as indicated in Table 68. Because zero was not in the 95% confidence interval, the indirect effect of task identity on affective commitment through overall job satisfaction was significantly different from zero at $p < .05$ (two tailed).

Table 68. Indirect Effects of Task Identity on Affective Commitment

Dependent, Independent, and Mediator Variables:				
DV = Affective Commitment				
IV = Task Identity				
MEDS = Overall_Job Satisfaction				
Indirect Effects of IV on DV by Mediators (ab paths)				
	Effect	*SE*	*Z*	*p*
TOTAL	.0982	.0151	6.5248	.0000
General	.0982	.0151	6.5248	.0000
Bias Corrected and Accelerated Confidence Intervals				
	Lower	Upper		
TOTAL	.0667	.1354		
General	.0667	.1354		

By examining the indirect effect of task significance on effective commitment, confidence intervals reported in Table 69 indicated that the true indirect effect was

estimated to lie between .1108 and .1850 for job satisfaction. These results revealed that overall job satisfaction was a mediator because its 95% confidence interval did not contain zero. The results of the Sobel test also confirmed that overall job satisfaction was a significant mediator between task significance and affective commitment (z = 8.3490, p = .0000 < .05).

Table 69. Indirect Effects of Task Significance on Affective Commitment

Dependent, Independent, and Mediator Variables:

DV = Affective Commitment

IV = Task Significance

MEDS = Overall_Job Satisfaction

Model Summary for the DV Model

R^2	Adj. R^2	F	$df1$	$df2$	p
.2525	.2507	142.3661	2.0000	843.0000	.0000

NORMAL THEORY TESTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV by Mediators (ab paths)

	Effect	*SE*	Z	*p*
TOTAL	.1450	.0174	8.3490	.0000
General_	.1450	.0174	8.3490	.0000

Bias Corrected and Accelerated Confidence Intervals

	Lower	Upper
TOTAL	.1108	.1850
General_	.1108	.1850

The indirect effects of autonomy on affective commitment by overall job satisfaction are presented in Table 70. The bootstrapped 95% confidence intervals for overall job satisfaction (IE lower 95% CI = .1798; upper 95% CI = .2589) did not

contain zero which showed that the indirect effect of autonomy on affective commitment through overall job satisfaction was significant. The Sobel test result was also significant for overall job satisfaction (z = 10.2352, p = .0000 < .05).

Table 70. Indirect Effects of Autonomy on Affective Commitment

Dependent, Independent, and Mediator Variables:

DV = Affective Commitment

IV = Autonomy

MEDS = Overall Job Satisfaction

Model Summary for DV Model

R^2	Adj. R^2	F	$df1$	$df2$	p
.2322	.2304	127.4709	2.0000	843.0000	.0000

NORMAL THEORY TESTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV by Mediators (ab paths)

	Effect	SE	Z	p
TOTAL	.2114	.0207	10.2352	.0000
General	.2114	.0207	10.2352	.0000

Bias Corrected and Accelerated Confidence Intervals

	Lower	Upper
TOTAL	.1708	.2589
General	.1708	.2589

The indirect effects of job feedback on affective commitment by overall job satisfaction are presented in Table 71. The Sobel test results (overall job satisfaction: z = 9.5161, p = .0000 < .05) and confidence intervals (overall job satisfaction: .1542 to .2400) revealed that overall job satisfaction was a mediator between job feedback and

affective commitment. The indirect effect of job feedback on affective commitment through overall job satisfaction was significantly different from zero at $p < .05$.

Table 71. Indirect Effects of Job Feedback on Affective Commitment

Dependent, Independent, and Mediator Variables:					
DV = Affective Commitment					
IV = Job_Feedback					
MEDS = Overall Satisfaction					
Model Summary for DV Model					
R^2	Adj. R^2	F	$df1$	$df2$	p
.2350	.2332	129.4939	2.0000	843.0000	.0000
Indirect Effects of IV on DV by Mediators (ab paths)					
	Effect	SE	Z	p	
TOTAL	.1934	.0203	9.5161	.0000	
General	.1934	.0203	9.5161	.0000	
Bias Corrected and Accelerated Confidence Intervals					
	Lower	Upper			
TOTAL	.1542	.2400			
General	.1542	.2400			

Mediation Analysis Results for Normative Commitment

The indirect effects on skill variety, task identity, task significance, autonomy, and job feedback on normative commitment by overall job satisfaction are presented in Tables 72 through 76. Bias corrected and accelerated confidence intervals revealed that the indirect effects of *skill variety* (lower, .1273; upper, .2079; Table 72), *task identity* (lower, .0733; upper, .1425; Table 73), *task significance* (lower, .1268; upper, .2046; Table 74), *autonomy* (lower, .2013; upper, .2946; Table 75), and *job feedback* (lower, .1775; upper, .2625; Table 76) on normative commitment by overall job satisfaction were significantly different from zero at $p < .05$ (two tailed). In my study, there was a 95% confidence that resulted because zero was not within these intervals and was therefore not likely to be a value for the indirect effects of skill variety, task

identity, task significance, autonomy, and feedback on normative commitment. Thus, overall job satisfaction was a mediator between the five job characteristics variables and normative commitment. The results of the Sobel test also confirmed that overall job satisfaction was a significant mediator between the independent variables of skill variety (z = 9.1572, p = .0000 < .05), task identity (z = 6.7060, p = .0000 < .05), task significance (z = 8.9086, p = .0000 < .05), autonomy (z = 11.9685, p = .0000 < .05), and job feedback (z = 10.4256, p = .0000 < .05) and the dependent variable of normative commitment.

Table 72. Indirect Effects of Skill Variety on Normative Commitment

Dependent, Independent, and Mediator Variables:

DV = Normative Commitment

IV = Skill_Variety

MEDS = Overall_Satisfaction

Model Summary for DV Model

R^2	Adj. R^2	F	$df1$	$df2$	p
.2811	.2794	164.8451	2.0000	843.0000	.0000

NORMAL THEORY TESTS FOR INDIRECT EFFECTS

Indirect Effects of IV on DV by Mediators (ab paths)

	Effect	SE	Z	p
TOTAL	.1651	.0180	9.1572	.0000
General_	.1651	.0180	9.1572	.0000

Bias Corrected and Accelerated Confidence Intervals

	Lower	Upper
TOTAL	.1273	.2079
General_	.1273	.2079

Table 73. Indirect Effects of Task Identity on Normative Commitment

Dependent, Independent, and Mediator Variables:

DV = Normative Commitment

IV = Task_Identity

MEDS = Overall_Satisfaction

Indirect Effects of IV on DV by Mediators (ab paths)

	Effect	*SE*	*Z*	*p*
TOTAL	.1072	.0160	6.7060	.0000
General_	.1072	.0160	6.7060	.0000

Bias Corrected and Accelerated Confidence Intervals

	Lower	Upper
TOTAL	.0733	.1425
General_	.0733	.1425

Table 74. Indirect Effects of Task Significance on Normative Commitment

Dependent, Independent, and Mediator Variables:

DV = Normative Commitment

IV = Task_Significance

MEDS = General Satisfaction

Model Summary for DV Model

R^2	Adj.R^2	*F*	*df*1	*df*2	*p*
.2917	.2900	173.5995	2.0000	843.0000	.0000

Indirect Effects of IV on DV through Proposed Mediators (ab paths)

	Effect	*SE*	*Z*	*p*
TOTAL	.1624	.0182	8.9086	.0000
General_	.1624	.0182	8.9086	.0000

Bias Corrected and Accelerated Confidence Intervals

	Lower	Upper
TOTAL	.1268	.2046
General_	.1268	.2046

Table 75. Indirect Effects of Autonomy on Normative Commitment

```
 Dependent, Independent, and Mediator Variables:
    DV  =   Normative Commitment
    IV  =   Autonomy
  MEDS  =   Overall_Satisfaction
Indirect Effects of IV on DV by Mediators (ab paths)
             Effect      se       Z          p
TOTAL        .2466     .0206   11.9685     .0000
General_     .2466     .0206   11.9685     .0000
Bias Corrected and Accelerated Confidence Intervals
             Lower     Upper
TOTAL        .2013     .2946
General_     .2013     .2946
```

Table 76. Indirect Effecst of Job Feedback on Normative Commitment

```
DV =   Normative Commitment
IV =   Job Feedback
MEDS = Overall_Satisfaction
               NORMAL THEORY TESTS FOR INDIRECT EFFECTS
Indirect Effects of IV on DV by Mediators (ab paths)
             Effect      SE       Z          p
TOTAL        .2179     .0209   10.4256    .0000
General_     .2179     .0209   10.4256    .0000
Bias Corrected and Accelerated Confidence Intervals
             Lower     Upper
TOTAL        .1775     .2625
General_     .1775     .2625
```

Moderation Analyses

The moderator hypothesis (H_{12}) was tested by using the SPSS macro with MODPROBE approach provided by Hayes and Matthes (2009). A moderated effect of the focal variable *F* on outcome variable *Y* was one in which its size or direction depended on the value of a third moderator (*M*) variable (Hayes & Matthes, 2009). The focal independent variable is the variable in which its effect on the dependent variable is thought to vary as a function of the moderator variable (Jaccard & Turrisi, 2003). MODBROBE is a moderation technique for investigating single degree-of-freedom interactions in ordinary least squares (OLS). The technique estimates model coefficients and standard errors in a model that includes predictor variables or focal variables, the product of moderator and the focal variable, and any additional predictor variables to test dependent variable. In addition to estimating the model's coefficients, MODBROBE produces tests on the conditional effect of the focal predictor on dependent variables at values of the moderator, also referred to as simple slopes. With the MODBROBE, conditional effects of focal variables were automatically calculated at the moderator's sample mean as well as one standard deviation above and below the sample in which case it produced conditional effects for the focal variables at the two values of the moderating variable.

Hayes and Matthes (2009) argued that moderated effects reveal themselves statistically as an interaction between *F* (focal variable) and *M* (the moderator) in a mathematical model of *Y*. In OLS, moderation effects are tested by including the product of the focal independent variable and the moderator as an additional predictor in the model. When an interaction is found, it should be probed in order to better

understand the conditions under which the relationship between the focal predictor and the outcome is strong versus weak, positive versus negative. The MODBROBE approach tests two models to detect if a moderation effect exists between the focal predictor variable and the dependent variable. While the first model includes the focal, moderator, and other predictor variables, the second model includes the interaction variable that is the product of focal and moderator variables. If an interaction effect is present, then the difference between the two R^2 values should be statistically significant (Jaccard & Turrisi, 2003).

Multicollinearity, a condition in which two variables are very highly correlated (.80 >), is a common problem when the focal and moderator variables are multiplied to generate the interaction term or variable (Tabachnick & Fidell, 2007). Multicollinearity produces strong betas in which the direction of the beta terms could shift from either previously positive to negative relationships or the opposite (Cohen, 1978). Review of the correlation values presented in Table 77 revealed that skill variety and the interaction term of skillvariety*GNS (r = .843), task identity and the interaction term of taskidentity*GNS (r = .858), task significance and the interaction term of tasksignificance*GNS (r = .812), autonomy and the interaction term of autonomy*GNS, and job feedback and the interaction term of jobfeedback*GNS were highly correlated.

Table 77. Correlations between Focal Variables and Interaction Terms

	1	2	3	4	5	6	7	8	9	10	11
Skill_variety	1										
Task_identity	.332**	1									
Task_significance	.467**	.237**	1								
Autonomy	.391**	.260**	.295**	1							
Job_feedback	.420**	.231**	.445**	.397**	1						
GNS	.152**	.131**	.291**	.083*	.136**	1					
SkillVariety*GNS	.843**	.340**	.510**	.345**	.393**	.632**	1				
TaskIdentity*GNS	.362**	.858**	.339**	.262**	.266**	.593**	.605**	1			
Significance*GNS	.408**	.242**	.812**	.247**	.373**	.773**	.720**	.581**	1		
Autonomy*GNS	.404**	.291**	.377**	.882**	.400**	.507**	.583**	.498**	.556**	1	
JFeedback*GNS	.404**	.260**	.490**	.348**	.823**	.650**	.653**	.541**	.713**	.594**	1

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

To eliminate problematic multicollinearity effects between the focal independent variable and the moderator and interaction variable, Jaccard and Turrisi (2003) recommend that the focal independent variable and the moderator be "mean centered" before testing the significance of the interaction term. To center a variable, the sample mean was subtracted from all respondents' scores on the variable thus producing a revised sample mean of zero. By using the CENTER subcommand in the MODBROBE, the focal independent variables and the moderator variable were automatically mean centered prior to computation of the product and estimation of the model coefficient.

Hypothesis 12 stated: "Growth Need Strength (GNS) will moderate the relationship between the job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, and normative)." Hayes and Matthes' (2009) MODBROBE moderation analysis tested whether or not GNS was a moderator between the job characteristics and the dependent variables (affective, continuance, and normative commitment). To test the moderation effect of GNS between the focal variables (skill variety, task identity, task significance, autonomy, and job feedback) and the dependent variables, a series of moderation analyses were employed.

Moderation Analysis Results for Affective Commitment

Moderation was determined by the test of significance for the coefficient of the interaction term. According to Kim, Kaye, and Wright (2001), if the null hypothesis is rejected and the coefficient is zero, moderation can be claimed. In other words, if the change in R-square (ΔR^2) for the interaction term was statistically significant, it would be said to have a moderating effect, and the moderator hypothesis

would be supported. The change in R-square (ΔR^2) was, in fact, the same as the square of the semipartial correlation for the interaction term. The *F* for the change in R^2 was the square of the *t* statistic for the interaction coefficient, and the *p* value for the *t* statistic for the interaction coefficient was the same as the *p* value for the *F* ratio corresponding to the change in R^2. This has been a well known equality in regression analysis (A. F. Hayes, personal communication, January 19, 2009).

The results of SPSS macro moderation analyses revealed that the joint tests of only task identity interactions and GNS on affective commitment were significant. As presented in Table 78, the change in R^2 was significant ($p = .0451$) at the $p = .05$ level, and the complete model regression summary revealed that all main effects accounted for 27% of the variance in affective commitment. Entering the interaction term produced a significant increase of criterion variance for the moderator model in which a significant portion of variance in affective commitment was explained, with task identity x GNS showing a significant negative regression coefficient ($B = -.0445$, $p = .0451$). This negative *B* indicated that a high GNS decreased the relationship between task identity and affective commitment. As a result, SPSS macro revealed that GNS was a moderator between task identity and affective commitment. However, GNS was not found to be a moderator between affective commitment and the focal independent variables that included skill variety ($\Delta R^2 = .0001$, $p = .7342$), task significance ($\Delta R^2 = .0003$, $p = .5306$), autonomy ($\Delta R^2 = .0000$, $p = .9382$), and job feedback ($\Delta R^2 = .0004$, $p = .4766$).

Table 78. SPSS Macro for Probing Interactions in OLS, Affective Commitment (Task Identity and Growth Need Strength)

Outcome Variable
 Affective Commitment
Focal Predictor Variable
 Task Identity
Moderator Variable
 Growth Need Strength(GNS)

Complete Model Regression Summary

R^2	*F*	*df*1	*df*2	*p*	*n*
.2688	19.0433	16.0000	829.0000	.0000	846.0000

R-square increased due to interaction:

R^2 change	*F*	*p*
.0036	4.0263	.0451

	b	se	*t*	*p*
constant	3.6277	.5873	6.1766	.0000
Marital_	-.1024	.1220	-.8392	.4016
Education	-.0644	.0544	-1.1852	.2363
Children	.0448	.0474	.9441	.3454
Skill_va	.0155	.0347	.4461	.6556
Task_sig	.1245	.0373	3.3390	.0009
Autonomy	.0770	.0331	2.3259	.0203
Job_Feed	.0155	.0380	.4086	.6829
Role_Con	-.0927	.0416	-2.2270	.0262
Role_Amb	-.0916	.0431	-2.1238	.0340
Role_Ove	.0572	.0429	1.3351	.1822
Intrinsi	.4493	.0691	6.4984	.0000
Extrinsi	.1350	.0613	2.2032	.0279
Tenure	.0232	.0094	2.4714	.0137
Task_ide	.0172	.0290	.5933	.5532
GNS	.0359	.0355	1.0112	.3122
Interaction	-.0445	.0222	-2.0066	.0451

Interaction = Task Identity x GNS.

Alpha level used for confidence intervals: .05
Moderator values were the sample mean and plus/minus one *SD* from mean.
The focal predictor and moderator were mean centered prior to analysis.

Moderation Analysis Results for Continuance Commitment

The results of SPSS macro moderation analyses revealed that only skill variety and GNS on continuance commitment were significant. As shown in Table 79, the change in R^2 was significant (p = .0127) at the p = .05 level. The complete model regression summary revealed that all main effects accounted for 5% of the variance in

continuance commitment. Entering the interaction term produced a significant increase of criterion variance for the moderator model in which a significant portion of variance in continuance commitment was explained with skill variety x GNS showing a significant negative regression coefficient (B = -.0657, p = .0127). This negative B indicated that a high GNS decreased the relationship between skill variety and continuance commitment. In addition, the conditional effects of focal predictor by default (cf., Table 79) would appear to indicate that only those that were relatively high in GNS would have a statistically significant negative relationship between skill variety and continuance commitment (t = -2.2604, p = .0241) with a 95% confidence interval from -.2024 to -.0143. In other words, at a high level of GNS, the coefficient was different from zero. However, at the mean (medium) level (CI = -.1072 and .0538) and low level (CI = -.0562 and .1662), the coefficient was not detectably different from zero.

As a result, the findings of SPSS macro revealed that GNS was a moderator between only skill variety and continuance commitment; however, GNS was not found to be a moderator between the other focal independent variables of task identity (ΔR^2 = .0001, p = .8348), task significance (ΔR^2 = .0035, p = .0823), autonomy (ΔR^2 = .0003, p = .6288), job feedback (ΔR^2 = .0002, p = .6663) and continuance commitment.

To identify the interaction form, the equation at the high and low level of GNS was plotted. The joint relationship form of skill variety and GNS on continuance commitment is illustrated in Figure 12. If there had been no interaction effect, the two lines would be parallel; however, it is evident from the figure that this was not the

case because skill variety influenced negatively to continuance commitment at the high level of GNS but influenced positively at the low level.

Table 79. SPSS Macro for Probing Interactions in OLS, Continuance Commitment (Skill Variety and Growth Need Strength)

Outcome Variable
 Continuance Commitment
Focal Predictor Variable
 Skill Variety
Moderator Variable
 Growth Need Strength (GNS)

Complete Model Regression Summary

R-sq.	*F*	*df*1	*df*2	*p*	*n*
.0528	2.8902	16.0000	829.0000	.0001	846.0000

R-square increase due to interaction:

R^2-chng.	*F*	*p*
.0071	6.2330	.0127

	b	*SE*	*t*	*p*
constant	5.8144	.7195	8.0812	.0000
Marital_	-.1105	.1431	-.7718	.4404
Educatio	-.2374	.0638	-3.7200	.0002
Children	-.0876	.0556	-1.5760	.1154
Task_ide	-.0022	.0340	-.0660	.9474
Task_sig	-.0099	.0437	-.2269	.8206
Autonomy	-.0765	.0389	-1.9683	.0494
Job_Feed	-.0161	.0446	-.3609	.7183
Role_Con	.1085	.0485	2.2368	.0256
Role_Amb	-.0720	.0507	-1.4206	.1558
Role_Ove	-.0399	.0505	-.7910	.4292
Intrinsi	.1210	.0812	1.4905	.1365
Extrinsi	.0073	.0719	.1012	.9194
Tenure	.0042	.0110	.3770	.7062
Skill_va	-.0267	.0410	-.6500	.5158
GNS	-.0234	.0419	-.5574	.5774
interaction	-.0657	.0263	-2.4966	.0127

Interaction = Skill Variety x GNS

Conditional effects of the focal predictor at values of the moderator:

GNS	*b*	*SE*	*t*	*p*	LLCI(*b*)	ULCI(*b*)
-1.2439	.0550	.0566	.9712	.3317	-.0562	.1662
.0000	-.0267	.0410	-.6500	.5158	-.1072	.0538
1.2439	-.1083	.0479	-2.2604	.0241	-.2024	-.0143

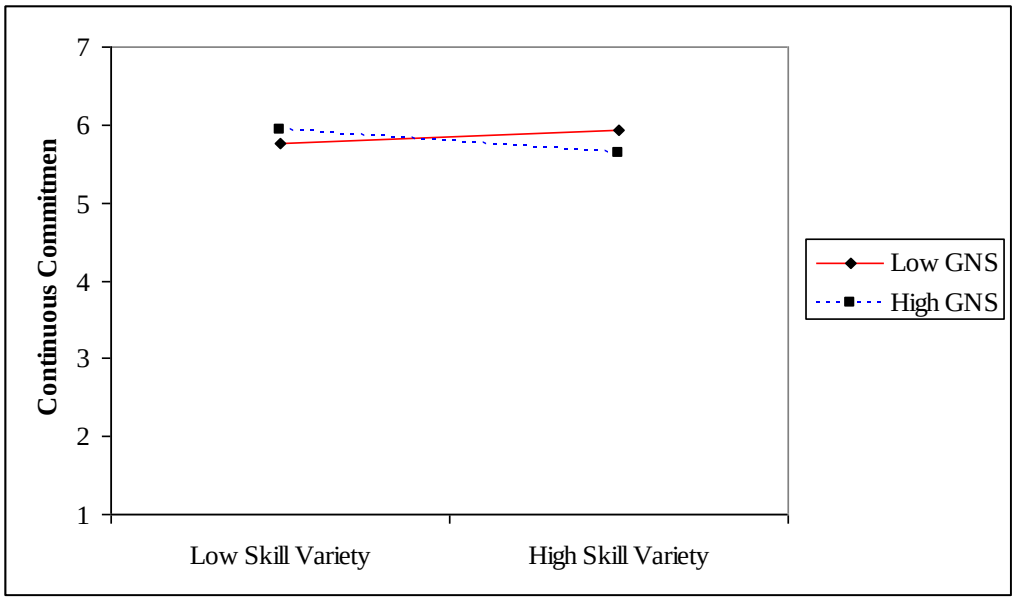

Figure 12. Moderator effect of GNS on the relationship between skill variety and continuance commitment.

Moderation Analysis Results for Normative Commitment

As presented in Table 80, the change in R^2 was significant (p = .0011) at the p = .05 level. The complete model regression summary revealed that all main effects accounted for 31% of the variance in the normative commitment. By entering the interaction term, a significant increase of criterion variance for the moderator model was produced. A significant portion of variance in normative commitment was explained with autonomy x GNS showing a significant positive regression coefficient (B = .0667, p = .0011). This positive B indicated that a high GNS increased the relationship between autonomy and normative commitment. In addition, the conditional effects of focal predictor by default (cf., Table 80) would appear to indicate that only among those relatively high in GNS would there be a statistically significant positive relationship between autonomy and normative commitment (t = 2.4984, p = .0127) with a 95% confidence interval from .0198 to .1646. In other

words, at a high level of GNS, the coefficient was different from zero. However, at the mean (medium) level (CI = -.0519 and .0703, *p* = .7670) and low level (CI = -.1583 and .0109, *p* = .0875), the coefficient was not detectably different from zero.

Table 80. SPSS Macro for Probing Interactions in OLS, Normative Commitment (Autonomy and Growth Need Strength)

Outcome Variable
  Normative Commitment
Focal Predictor Variable
  Autonomy
Moderator Variable
  Growth Need Strength (GNS)

Complete Model Regression Summary

R-sq.	*F*	*df*1	*df*2	*p*	*n*
.3123	23.5342	16.0000	829.0000	.0000	846.0000

R-square increase due to interaction:

R-chng.	*F*	*p*
.0089	10.7647	.0011

	b	*SE*	*t*	*p*
constant	2.5269	.5766	4.3826	.0000
Marital_	-.0188	.1133	-.1658	.8683
Educatio	-.0343	.0505	-.6796	.4970
Children	.1102	.0440	2.5068	.0124
Skill_va	-.0202	.0320	-.6296	.5291
Task_ide	-.0312	.0268	-1.1632	.2451
Task_sig	.1056	.0346	3.0506	.0024
Job_Feed	-.0158	.0353	-.4486	.6538
Role_Con	-.0156	.0385	-.4041	.6862
Role_Amb	-.0942	.0401	-2.3505	.0190
Role_Ove	.0651	.0398	1.6366	.1021
Intrinsi	.5890	.0642	9.1745	.0000
Extrinsi	.2216	.0569	3.8943	.0001
Tenure	.0099	.0087	1.1355	.2565
Autonomy	.0092	.0311	.2964	.7670
GNS	-.0040	.0330	-.1213	.9035
Interaction	.0667	.0203	3.2810	.0011

Interaction = Autonomy X GNS

Conditional effects of the focal predictor at values of the moderator:

GNS	*b*	*SE*	*t*	*p*	LLCI(*b*)	ULCI(*b*)
-1.2439	-.0737	.0431	-1.7108	.0875	-.1583	.0109
.0000	.0092	.0311	.2964	.7670	-.0519	.0703
1.2439	.0922	.0369	2.4984	.0127	.0198	.1646

To identify the interaction form, the equation at the high and low levels of GNS was plotted. The joint relationship form of autonomy and GNS on normative commitment is illustrated in Figure 13. As mentioned earlier, if there were no interaction effects, the two lines would be parallel; however, it is evident from the figure that this was not the case because skill variety influenced positively to normative commitment at the high level of GNS but influenced negatively at the low level.

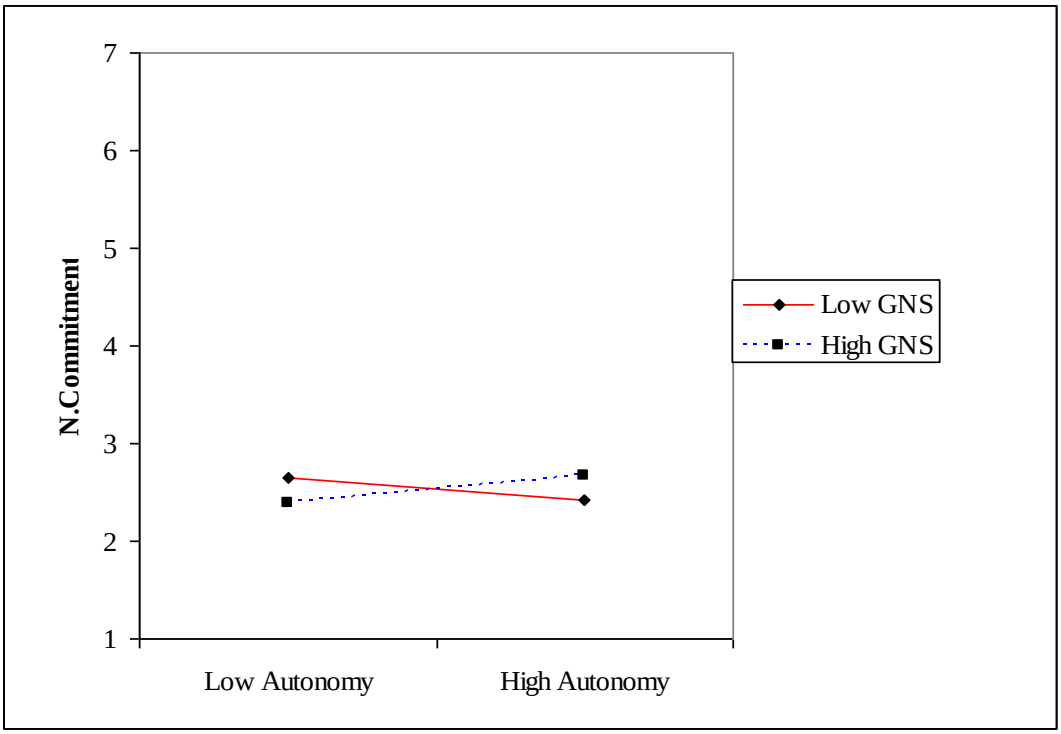

Figure 13. Moderator effect of GNS on the relationship between autonomy and normative commitment.

The change in R^2 was significant (p = .0303) at the p = .05 level as shown in Table 81. Entering the interaction term produced a significant increase of criterion variance for the moderator model. A significant portion of variance in normative commitment was explained with job feedback x GNS showing a significant positive regression coefficient (B = .0516, p = .0303). This positive B indicated that a high

GNS increased the relationship between job feedback and normative commitment. As a result, the findings of SPSS macro revealed that GNS was a moderator between autonomy and normative commitment as well as job feedback and normative commitment. However, GNS was not found to be a moderator between other focal independent variables that included skill variety ($\Delta R^2 = .0007$, $p = .3701$), task identity ($\Delta R^2 = .0004$, $p = .4654$), task significance ($\Delta R^2 = .0011$, $p = .2515$), and normative commitment.

Table 81. SPSS Macro for Probing Interactions in OLS, Normative Commitment (Job Feedback and Growth Need Strength (GNS)

Outcome Variable: Normative Commitment
Focal Predictor Variable: Job Feedback
Moderator Variable: Growth Need Strength (GNS)

Complete Model Regression Summary

R-sq.	*F*	*df1*	*df2*	*p*	*n*
.3023	22.4480	16.0000	829.0000	.0000	846.0000

R-square increase due to interaction:

R^2-chng	*F*	*p*
.0040	4.7080	.0303

	b	*SE*	*t*	*p*
constant	2.3223	.5578	4.1630	.0000
Marital_	-.1317	.1059	-1.2431	.2142
Educatio	-.0316	.0512	-.6161	.5380
Unit	.0004	.0192	.0190	.9848
Skill_va	-.0169	.0322	-.5243	.6002
Task_ide	-.0269	.0271	-.9908	.3221
Task_sig	.1100	.0350	3.1441	.0017
Autonomy	.0221	.0310	.7138	.4755
Role_Con	-.0247	.0387	-.6390	.5230
Role_Amb	-.0954	.0405	-2.3585	.0186
Role_Ove	.0654	.0404	1.6210	.1054
Intrinsi	.6092	.0646	9.4297	.0000
Extrinsi	.2105	.0573	3.6749	.0003
Tenure	.0016	.0080	.1961	.8446
Job_Feed	-.0287	.0360	-.7982	.4250
GNS	-.0131	.0332	-.3960	.6922
interaction	.0516	.0238	2.1698	.0303

Interaction = Job Feedback x GNS

Alpha level used for confidence intervals: .05
Moderator values are the sample mean and plus/minus one SD from mean
The focal predictor and moderator were mean centered prior to analysis

Statistical Summary and Hypotheses Testing

There were nine research questions in my study that addressed the 3-component model of organizational commitment related to antecedents. Eighteen hypotheses were developed and tested through hierarchical regression, MANOVA, and SPSS Macro mediation and moderation analyses. The results of the hypotheses testing are summarized below.

Hypotheses 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 were tested by regressing affective commitment, continuance commitment, and normative commitment as they related to tenure, education marital status, number of children, job characteristics variables, role related variables, and job satisfaction variables. In the hierarchical regression analysis, age and working unit were controlled since they might impact the dependent variables beyond the independent variables.

Hypotheses 3 and 18 were tested by utilizing MANOVA. This statistical technique tested whether or not any significant differences existed between groups on the demographic variables of gender and management level or position that could account for differences in the variables of affective, continuance, and normative commitment. Finally, for hypotheses 12 and 17, SPSS Macro was used to test the mediating effect of overall job satisfaction and the moderating effect of growth need strength (GNS).

H_1. *Tenure is positively related to each component of organizational commitment (affective, continuance, and normative).*

A positive significant relationship existed between affective commitment and tenure (ß = .151, t = 2.520, p = .012) but tenure was not significantly related to

continuance and normative commitment. Therefore, Hypothesis 1 was supported only for affective commitment.

H_2. *Education is negatively related to each component of organizational commitment (affective, continuance, and normative).*

Although a significant negative relationship existed between continuance commitment and education (t = -3.662, p = .000 < .05), education was not significantly related to affective and normative commitment. Therefore, Hypothesis 2 was supported only for continuance commitment.

H_3. *There is a significant difference between females and males in regard to affective, continuance, and normative commitment.*

The MANOVA contrast results revealed that there was no significant difference between females and males in regard to affective, continuance, and normative commitment (p = .097, .385, .160 > .05). Therefore, Hypothesis 3 was not supported.

H_4. *Marital status is positively related to affective and continuance commitment but negatively related to normative commitment*.

The hierarchical regression results indicated that marital status was not significantly related to affective, continuance, and normative commitment at the level of .05. Therefore, Hypothesis 4 was not supported.

H_5. *Number of children is positively related to affective and continuance commitment but negatively related to normative commitment.*

Hierarchical regression results indicated that having more children made a significant positive contribution to the variance in normative commitment (t = 2.431, p = .015 < .05); however, no significant correlation was found between number of

children and the affective and continuance commitment. Therefore, Hypothesis 5 was supported only for normative commitment.

H_6. *Skill variety is positively related to affective and normative commitment but negatively related to continuance commitment.*

Although skill variety was positively related to affective commitment and negatively related to continuance and normative commitment, the correlation was not significant. Therefore, Hypothesis 6 was not supported.

H_7. *Job feedback is positively related to each component of organizational commitment (affective, continuance, and normative).*

The regression results indicated that job feedback was not significantly related to affective, continuance, and normative commitment at the .05 level. Therefore, Hypothesis 7 was not supported.

H_8. *Autonomy is positively related to affective and normative commitment but negatively related to continuance commitment.*

According to the regression results, there was a strong positive correlation between autonomy and affective commitment (ß = .80, t = 2.079, p = .038) as well as a strong negative correlation between autonomy and continuance commitment (ß = -.82, t = 2.085, p =.037); however, no significant relationship was found between autonomy and normative commitment. Therefore, Hypothesis 8 was supported only for affective and continuance commitment.

H_9. *Task identity is positively related to each component of organizational commitment (affective, continuance, and normative).*

Task identity was not significantly related to affective, continuance, and normative commitment at the .05 level. Therefore, Hypothesis 9 was not supported.

H_{10}. *Task significance is positively related to affective and normative commitment but negatively related to continuance commitment.*

Hypothesis 10 was concerned with the relationship between task significance and the 3-components of organizational commitment. Based on regression results, the coefficient of .137 and the *t*-value of 3.726 were significant (p = .000) for affective commitment, and task significance also made a significant contribution to the variance in normative commitment (ß = .100, t = 2.923, p = .004). However, continuance commitment was the only dependent variable which was not significantly related to task significance. Thus, Hypothesis 10 was supported for affective and normative commitment.

H_{11}. *Motivating Potential Score (MPS) is positively related to each component of organizational commitment (affective, continuance, and normative).*

Hypothesis 11 was not tested because MPS was highly correlated with one or more job characteristics. As stated earlier, MPS was dropped from further regression analyses due to the problem of multicollinearity (Tabachnick & Fidell, 2007).

H_{12}. *Growth Need Strength (GNS) will moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and feedback) and each component of organizational commitment (affective, continuance, and normative).*

The effect of the interaction term or the product of task identity and GNS on effective commitment was statistically significant. For example, the change in R^2 between the first model without interaction and the second model with interaction was significant (p = .0451) at the p = .05 level. Therefore, GNS moderated the relationship between task identity and affective commitment. However, GNS was not a moderator

between affective commitment and skill variety, task significance, autonomy, and job feedback because the R^2 changes between models were not significant at the .05 level.

Moderation analyses also indicated that GNS moderated the relationship between skill variety and continuance commitment, autonomy and normative commitment, and job feedback and normative commitment. However, GNS did not moderate the relationship between continuance commitment and the job characteristics of task identity, task significance, autonomy, and job feedback. Similarly, the moderating effect of GNS was not statistically significant between normative commitment and skill variety, task identity, and task significance. Based on these test results, Hypothesis 12 was partially supported.

H_{13}. *Role ambiguity is negatively related to affective and normative commitment but positively related to continuance commitment.*

As expected, role ambiguity was inversely related to affective commitment (ß = -.083, t = -2.271, p = .023) and normative commitment (ß = -.091, t = -2.268, p = .024). However, role ambiguity was not significantly related to continuance commitment. Thus, Hypothesis 13 was supported for affective and normative commitment.

H_{14}. *Role conflict is negatively related to affective and normative commitment, but positively related to continuance commitment.*

Regression results indicated that role conflict was negatively related to affective commitment and positively related to continuance commitment; however, the relationship between role conflict and normative commitment was not significant. Thus, Hypothesis 14 was supported for affective and continuance commitment.

H_{15}. *Role overload is negatively related to affective and normative commitment but positively related to continuance commitment.*

No relationship was found between role overload and the three dependent variables (affective, continuance, and normative commitment). Hence, Hypothesis 15 was not supported.

H_{16}. *Intrinsic, extrinsic, and overall job satisfaction are positively related to affective and normative commitment but negatively related to continuance commitment.*

The results of the analysis indicated that intrinsic satisfaction and extrinsic satisfaction were significantly and positively related to both affective and normative commitment; however, neither intrinsic satisfaction nor extrinsic satisfaction was significantly related to continuance commitment.

Overall job satisfaction was highly correlated with intrinsic and extrinsic satisfaction. Because overall job satisfaction was dropped from further regression analyses due to the problem of multicollinearity (Tabachnick & Fidell, 2007), its contribution to the model was not examined. Based on these results, Hypothesis 16 was supported for affective and normative commitment.

H_{17}. *Overall job satisfaction will mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and each component of organizational commitment (affective, continuance, and normative).*

Bias corrected and accelerated confidence intervals indicated that the indirect effects of skill variety, task identity, task significance, autonomy, and job feedback on both effective and normative commitment by overall job satisfaction was significantly

different from zero at $p < .05$ (two-tailed). Thus, overall job satisfaction was a mediator between the five job characteristics and the affective and normative commitment dependent variables.

As stated previously, Hypothesis 17 was not tested for continuance commitment because the mediation conditions did not exist (Tepper et al., 1996). Thus, Hypothesis 17 was fully supported by the data.

H_{18}. *There is a significant difference between first and mid-level supervisors and police officers in regard to affective, normative, and continuance commitment*.

As hypothesized, the MANOVA results revealed that there was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level supervisors (p = .050, .000, .001) as well as between first level supervisors and police officers (p = .049, .050, .036). However, MANOVA analysis did not find any significant difference in the level of affective, continuance, and normative commitment between first level supervisors and mid-level supervisors. Thus, Hypothesis 18 was fully supported by the data. In sum, results of the hypotheses testing are presented in Table 82.

Table 82. Summary of the Hypothesis Testing Results

		Individual Dependent Variables		
Hypotheses	Overall Results	Affective	Continuance	Normative
H_1. Tenure is positively related to each component of organizational commitment (affective, continuance, and normative).	Partially Supported	Supported	Not Supported	Not Supported
H_2. Education is negatively related to each component of organizational commitment (affective, continuance, and normative).	Partially Supported	Not Supported	Supported	Not Supported
H_3. There is a significant difference between females and males in regard to affective, continuance, and normative commitment.	Not Supported	Not Supported	Not Supported	Not Supported
H_4. Marital status is positively related to affective and continuance commitment but negatively related to normative commitment.	Not Supported	Not Supported	Not Supported	Not Supported
H_5. Number of children is positively related to affective and continuance commitment but negatively related to normative commitment.	Partially Supported	Not Supported	Not Supported	Supported
H_6. Skill variety is positively related to affective and normative commitment but negatively related to continuance commitment.	Not Supported	Not Supported	Not Supported	Not Supported
H_7. Job Feedback is positively related to each component of organizational commitment (affective, continuance, and normative).	Not Supported	Not Supported	Not Supported	Not Supported
H_8. Autonomy is positively related to affective and normative commitment but negatively related to continuance commitment.	Partially Supported	Supported	Supported	Not Supported

Table 82 (continued)

Hypotheses	Overall R.	Individual Dependent Variables		
		Affective	Continuance	Normative
H_9. Task identity is positively related to each component of organizational commitment (affective, continuance, and normative).	Not Supported	Not Supported	Not Supported	Not Supported
H_{10}. Task significance is positively related to affective and normative commitment but negatively related to continuance commitment.	Partially Supported	Supported	Not Supported	Supported
H_{11}. Motivating Potential Score (MPS) is positively related to each component of organizational commitment (affective, continuance, and normative).	Not Tested	Not Tested	Not Tested	Not Tested
H_{12}. Growth Need Strength (GNS) will mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and feedback) and each component of organizational commitment (affective, continuance, and normative).	Partially Supported			
Skill Variety─GNS (moderator)─DVs		Not Supported	Supported	Not Supported
Task Identity─GNS (moderator)─DVs		Supported	Not Supported	Not Supported
Task Significance─GNS (moderator)─DVs		Not Supported	Not Supported	Not Supported
Autonomy─GNS (moderator)─DVs		Not Supported	Not Supported	Supported
Job Feedback─GNS (moderator)─DVs		Not Supported	Not Supported	Supported
H_{13}. Role ambiguity is negatively related to affective and normative commitment but positively related to continuance commitment.	Partially Supported	Supported	Not Supported	Supported
H_{14}. Role conflict is negatively related to affective and normative commitment but positively related to continuance commitment.	Partially Supported	Supported	Supported	Not Supported

Table 82 (continued)

Hypotheses	Overall Result	Affective	Continuance	Normative
H_{15}. Role overload is negatively related to affective and normative commitment but positively related to continuance commitment.	Not Supported	Not Supported	Not Supported	Not Supported
H_{16}. Intrinsic, extrinsic, and overall job satisfaction are positively related to affective and normative commitment but negatively related to continuance commitment.	Partially Supported	Supported	Not Supported	Supported
H_{17}. Overall job satisfaction will mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, and normative).	Supported			
Skill Variety─Satisfaction (mediator)─DVs		Supported	Not Tested	Supported
Task Identity─ Satisfaction (mediator)─DVs		Supported	Not Tested	Supported
Task Significance─Satisfaction (mediator)─DVs		Supported	Not Tested	Supported
Autonomy─Satisfaction (mediator)─DVs		Supported	Not Tested	Supported
Job Feedback─Satisfaction (mediator)─DVs		Supported	Not Tested	Supported
H_{18}. There is a significant difference between first and mid-level supervisors and police officers in regard to affective, normative, and continuance commitment.	Supported	Supported	Supported	Supported

Summary

Chapter IV presented data screening, demographic characteristics of the sample, descriptive statistics for variables, reliability and validity analyses for all scales, and the resulting statistical analyses of the hypotheses. The reliability coefficients for all study variables were above the .70 threshold. Thus, the data collected from the instrument were reliable. Based on the exploratory factor analyses, the scales were found to be valid. Eighteen hypotheses were tested using hierarchical regression, MANOVA, and mediation and moderation analyses. Hypotheses 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16 were tested by hierarchical regression. Based on MANOVA used to test Hypotheses 3 and 18, police officers reported low affective and normative but higher continuance commitment. First level supervisors had higher affective and normative but lower continuance commitment when compared to police officers (H_{18}). In contrast to management level, the mean difference between females and males for affective, continuance, and normative commitment were not significant (H_3). The mediator hypothesis (H_{17}) was tested by using the SPSS macro with bootstrapping. Overall job satisfaction was found to be a mediator between all five job characteristics and affective and normative commitment. The moderator hypothesis (H_{12}) was tested by using the SPSS macro with the MODPROBE approach. Results revealed that GNS was a moderator between task identity and affective commitment, skill variety and continuance commitment, and job characteristics of autonomy and job feedback and normative commitment.

CHAPTER V

SUMMARY, DISCUSSION, IMPLICATIONS, AND LIMITATIONS

Chapter V is divided into five sections that include a summary of the study followed by a discussion of the general findings in reference to theory and related literature. The third section discusses the theoretical, policy, and practical implications of my study, and the fourth section includes the limitations and implications for future research. Finally, conclusions are presented in the fifth section.

Summary of the Study

The main focus of my study was to investigate the relationship between the dependent variables of affective, continuance, and normative commitment and the intrinsic and extrinsic predictor variables of job satisfaction, job characteristics (skill variety, task identity, task significance, autonomy, and job feedback), role characteristics (role conflict, role ambiguity, and role overload), and selected demographic variables (tenure, level of education, gender, marital status, and number of children). A comparison was made between police officers and first and mid-level supervisors of the TNP in order to test whether or not there was a difference between their affective, continuance, and normative commitment levels. The final purpose was to examine the moderating role of growth need strength (GNS) and the mediating role of overall job satisfaction between the five job characteristics and three components of organizational commitment.

Eighteen hypotheses were developed to answer the following research questions that guided my study.

1. To what extent are selected personal characteristics (i.e., tenure, education, number of children, and marital status) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

2. To what extent are job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

3. To what extent is the Motivating Potential Score (MPS) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

4. Does the Growth Need Strength (GNS) moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

5. To what extent are role related characteristics (role ambiguity, role conflict, and role overload) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

6. To what extent is each job satisfaction facet (overall, intrinsic, extrinsic) related to each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

7. Does overall job satisfaction mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, job feedback) and

each component of organizational commitment (affective, continuance, normative) in the Turkish National Police?

8. Is there a significant difference between first and mid-level supervisors and police officers who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

9. Is there a significant difference between females and males who serve in the Turkish National Police with regard to affective, continuance, and normative commitment?

The first group of hypotheses suggested that there would be a significant relationship between the three components of organizational commitment (affective, continuance, and normative commitment) and selected demographic variables (tenure, education, number of children, and marital status), job characteristics (skill variety, task identity, task significance, autonomy, and job feedback), motivating potential score, role related variables (role conflict, role ambiguity, and role overload), and facets of job satisfaction (intrinsic, extrinsic, and overall job satisfaction). The second group of hypotheses tested the mean differences between females and males and between police officers and police supervisors in regard to levels of affective, continuance, and normative commitment. Finally, the third group of hypotheses was tested to determine if overall job satisfaction was a mediator and if growth need strength (GNS) was a moderator between the five job characteristics and three components of organizational commitment.

The target population was comprised of police officers and first level and mid-level supervisors employed in four cities of Turkey (Ankara, Istanbul, Malatya, and Diyarbakir). While first level supervisors included captains, lieutenants, and sergeants, mid-level supervisors included superintendents, second class chief superintendents, and first class chief superintendents. At the time of my study, there were 55,885 police officers, 2,624 first level supervisors, and 1,684 mid-level supervisors who worked for the Turkish National Police (TNP) in these geographically dispersed cities. To achieve a 95% confidence interval and a population sampling error of plus or minus five percentage points (Isaac & Michael, 1995), I obtained a sample from Ankara (n = 377); Istanbul (n = 379; Malatya (n = 322; and Diyarbakir (n = 351). Thus, a total of 1,429 police officers and police supervisors were initially obtained and selected from various departments within these cities. A probability sampling method was used to ensure that subgroups within the population were adequately represented.

Because I collected data on many variables from a large group of subjects who were geographically dispersed, a cross sectional design was employed. In the research method, I used an electronic e-mail survey instrument to gather data from the target population that was derived from survey instruments found in the organizational commitment and job satisfaction literature. Rather than constructing new instruments, those developed by Hackman and Oldham (1980), Meyer and Allen (1997), Rizzo et al. (1970), Spector and Jex (1998), and Weiss et al. (1967) were used to increase the reliability and validity of my study. Specifically, organizational commitment was measured using Meyer and Allen’s (1997) revised scales that consisted of affective

commitment (ACS), continuance commitment (CCS), and normative commitment (NCS). Job satisfaction was measured by using the short form of the Minnesota Satisfaction Questionnaire (MSQ) developed by Weiss et al., and Hackman and Oldham's Job Diagnostic Survey (JDS) was used to measure GNS and five job characteristics (skill variety, task identity, task significance, autonomy, and job feedback). Role conflict and role ambiguity were measured by using Rizzo et al.'s (1970) role conflict and role ambiguity scales. Finally, role overload was measured by the revised Quantitative Workload Inventory (QWI) developed by Spector and Jex.

As previously noted, there was one distribution of 1,429 surveys sent to qualified respondents in Ankara (n = 377), Istanbul (n = 379), Malatya (n = 322), and Diyarbakir (n = 351) that initially included 539 police officers and 328 first and mid-level police supervisors (N = 867, 61.2%). However, 21 (1.5%) responders returned incomplete and thus unusable questionnaires. Therefore, completed and usable returned e-mailed surveys totaled 522 police officers and 324 police supervisors (59.7%) who were comprised primarily of males (91.6%) with only 8.4% accounted for by females. Of these respondents (N = 846), 664 (78.5%) indicated that they were married and 182 (21.5%) were single. The data revealed that the highest degree earned by the majority of police officers and police supervisors was a bachelor's degree (n = 402; 47.5%). In regard to working unit, the majority of respondents (n = 436) fell into the category of judicial and preventive units (51.5%), a ratio that was close to the distribution of police officers and police supervisors in TNP's population. Descriptive statistics indicated that the age of

respondents ranged between 20 to 50, and the number of years that police officers and supervisors had worked for TNP ranged from one to 30.

Of the three organizational commitment scales, affective commitment had the highest mean (5.23) with a standard deviation of 1.24, continuance commitment had the lowest mean (4.74) with a standard deviation of 1.20, and normative commitment had a mean of 5.08 out of a total possible score of 7.0. Of the three job satisfaction scales, intrinsic job satisfaction had the highest mean (3.38) with a standard deviation of .73, extrinsic job satisfaction had the lowest mean (2.98) with a standard deviation of .86, and overall job satisfaction had a mean of 3.22 out of a total possible score of 5.0. Based on a 7-point scale, scores from the job characteristics (skill variety, task identity, task significance, and job feedback) were found to have relatively high mean values. Autonomy was the only variable of job characteristics that scored a mean lower than 4.0. The data revealed that skill variety (M = 4.55) and task significance (M = 5.54) received the highest agreement from the respondents. However, respondents were uncertain regarding the degree to which the job provided substantial freedom (M =3.76), job feedback (M = 4.41), and required completion of a whole and identifiable piece of work (M =4.33). The results indicated that the mean overall GNS scale was 5.32 with a standard deviation of 1.24. Based on a 7-point Likert scale, most respondents experienced a higher level of role conflict (M = 4.29) compared with role ambiguity (M = 2.96). Finally, the mean score for role overload was 3.2 with a standard deviation of 1.02.

To determine internal consistency of the scales, Cronbach's alpha coefficient *(A or α)* was calculated. Based on the literature, .70 was accepted as an acceptable level of

alpha (Tabachnich & Fidell, 2007). The results indicated that internal consistency of each scale was very good or above the .70 reliability threshold. Thus, the data collected from the instruments were reliable.

In addition to the reliability of the scales, the questionnaire instrument was examined for construct validity in which exploratory factor analysis was used to justify the requirements. Only items with factor loadings greater than .30 in absolute value were retained in my study (Nachmias & Nachmias, 2000).The results indicated that all normative commitment, skill variety, task identity, task significance, autonomy, job feedback, role conflict, role ambiguity, role overload, and growth need strength items had loadings greater than .30. In other words, they operated as separate constructs. However, one item from affective commitment, three items from continuance commitment, two items from intrinsic satisfaction, and two items from extrinsic satisfaction did not show high loadings greater than .30. After deleting (Tabachnich & Fidell, 2007) these items, the factor analysis yielded an expected factor solution for the variables.

Out of the 18 hypotheses, the following 14 were tested by hierarchical regression: Hypotheses 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, and 16. Before running the analysis, the assumptions of ratio of cases to IVs, absence of outliers among the IVs and on the DV, absence of multicollinearity, normality, linearity, homoscedasticity of residuals, and independence of errors (Tabachnick & Fidell, 2007) were met for the current data. A separate hierarchical regression for affective, continuance and normative commitment was computed that examined the relationship between the dependent variables and predictor variables.

Hypothesis 3 and Hypothesis 18 were tested by using MANOVA through the General Linear Model (GLM) in which MANOVA tested whether or not any significant differences existed between groups on the demographic variables of gender and management level that could account for differences in the variables of affective, continuance, and normative commitment. Hypothesis 17 was tested by using the SPSS macro with bootstrapping provided by Preacher and Hayes (2008). In this analysis, the mediation role of overall job satisfaction between the five job characteristics and three organizational commitment variables was tested. Finally, Hypothesis 12 was tested by using SPSS macro with the MODPROBE approach provided by Hayes and Matthes (2009). In this analysis, the moderation role of GNS between the five job characteristics and organizational commitment variables were tested. Out of 18 hypotheses, 6 were not supported while the remaining 12 were either partially supported or fully supported by the data.

Discussion of the General Findings

Organizational Commitment

The instruments used in my study were all determined to be reliable and valid through internal consistency and construct validity testing.

The findings of my study supported the multidimensionality of affective commitment (AC), continuance commitment (CC), and normative commitment (NC). Consistent with previous research, the instrument validity for AC, CC, and NC was examined in terms of construct validity. When I ran the functions of exploratory factor analysis in order to justify the requirements of construct validity, the factor analysis

yielded a 3-factor as expected. As discussed in Chapter IV, affective commitment represented Factor 4 for items 1 through 6 and showed a range of loading from .320 to .771 with the exception of .061 for Item 2; continuance commitment represented Factor 3 for items 7 through 13 and showed a range of loading from .327 to .822; and normative commitment represented Factor 2 for items 14 through 19 and showed a range of loading from .425 .753 (cf., Table 35). The results of the factor loadings indicated that all commitment items had high factor loadings. In other words, AC, CC, and NC operated as separate constructs.

In terms of validity of the three component scales, Allen and Meyer (1990) reported that statistical analyses demonstrated both discriminant and convergent validity for the commitment scales; therefore, the three components were conceptually and empirically distinct. In another study, Stephen (2007) found that NCS did not indicate a high degree of discriminant validity with ACS in North American studies. While the NCS items invariably loaded on a separate factor from ACS items in confirmatory factor analysis, the NCS tended to be highly correlated with the ACS. Also, in non-Western countries, the NCS and ACS tended to be even more highly correlated, but NCS showed greater discriminant validity in these settings because it was more likely to contribute significantly to outcome predictions. My study also supported Stephen's findings in terms of normative commitment. Because one AC item and three CC items did not show high factor loadings greater than .30, they were deleted from further analysis. In contrast to AC and CC, all NC items loaded high (.599, .611, .784, .682, .773, .649) on factors; thus, the removal of any item from NC was not applicable.

A possible explanation for these results might be related to the high collectivist nature of the Turkish culture. According to Hofstede (1980), individualism implies a loosely knit social framework in which individuals are expected to take care of only themselves and their immediate families, while collectivism is characterized by a tight social framework in which individuals distinguish between in-groups and out-groups. The main difference between these two social frameworks is with respect to the concept of self. While the definition of self is independent in individualistic cultures, the term is interdependent in collectivist cultures (Hofstede, 2001).

Although Wong et al. (2002) found affective commitment to be the best determinant for employee attitudes, the role of normative commitment gained more attention as cross-cultural studies became more popular (Meyer & Allen, 1997). For example, normative commitment in Turkey was considered to be a significant variable in terms of employee attitudes when compared to affective and continuance commitment (Wasti, 2003). Studies conducted by Chen and Francesco (2003) and Cheng and Stockdale (2003) found that China, another collectivistic society, also supported the utility of normative commitment. Thus, the moral nature of employee and employer attachment in collectivist cultures may be due to the personal components of an employee's relationship to the organization (Wasti, 2003).

Consistent with previous research (Hackman & Oldham, 1975; Meyer & Allen, 1997; Rizzo et al., 1970; Spector, 1997; Weiss et al., 1967) data were analyzed for internal consistency in my study. Cronbach's alpha level for the organizational commitment scales was .79 for affective commitment and .77 for continuance

commitment. The normative commitment scale, however, had the highest alpha level value (.82) when compared to ACS and CCS. Thus, the Cronbach alpha coefficients for all affective, continuance, and normative commitment scales indicated good reliability since they exceeded the minimum acceptable value of .70 recommended by Nunnally and Bernstein (1994). Similar to my study, internal consistency of the scales was estimated by Meyer and Allen (1997) by using coefficient alpha. Although internal consistency for the normative commitment scale in Meyer and Allen's (1997) research was the lowest (.73) when compared to the other two scales (affective and continuance), it was still good enough for the scale's reliability. In their earlier study conducted in 1991, reliability for the normative commitment scale was reported as .79, and the number of estimates obtained for the AC was more than 40. Among the three components, the reliability was the highest for the affective commitment scale (0.85). In my study, the results of reliability for the continuance commitment scale (.77) were also very close to Meyer and Allen's (1997) previous study where the reliability CCS was found to be .79 using coefficient alpha.

Job Satisfaction

As discussed in Chapter IV, intrinsic job satisfaction (Factor 1) resulted in a factor loading range from .398 to .723, and extrinsic job satisfaction (Factor 2) ranged from .433 to .823 indicating that intrinsic job satisfaction and extrinsic job satisfaction operate as separate constructs. When Weiss et al. (1967), developers of the Minnesota Satisfaction Questionnaire (MSQ), examined the instrument by construct validity, concurrent validity, and content validity, factor analytic results supported the validity of

the MSQ. In my study, the rotated component matrix for the retained items indicated that from the two items specific to general job satisfaction, working conditions (JS17) loaded .721 and coworkers (JS18) loaded .670 on extrinsic job satisfaction (cf., Table 40). Although the MSQ used in my study did not contain working conditions and coworkers in the extrinsic classification of job satisfaction, they were often considered in the literature as components. For example, Herzberg et al. (1959) argued that hygiene factors or extrinsic factors were components that created job dissatisfaction but, if not present, they returned the worker to only a neutral point of job satisfaction. According to Herzberg, working conditions and coworkers fall into the extrinsic factor category.

Using the short form of MSQ, Spector (1997) and Weiss et al. (1967) reported acceptable internal consistency reliabilities for extrinsic, intrinsic, and general job satisfaction. In Weiss et al.'s study, for example, the intrinsic job satisfaction scale had coefficients ranging from .84 to .91; the extrinsic job satisfaction scale coefficients ranged from .77 to .82; and, the overall job satisfaction scale indicated reliability coefficients from .87 to .92. In other research, Hirschfeld (2000) examined a 2-dimensional model that contained intrinsic and extrinsic job satisfaction and found alpha coefficients to range from .87 to .95 that confirmed the scale's internal consistency. Baugh and Roberts (1994) also included two subscales that measured extrinsic job satisfaction and intrinsic job satisfaction. In their sample, the internal consistency reliability was .85 for general job satisfaction (20 items), .88 for the intrinsic job satisfaction scale, and .76 for the extrinsic job satisfaction scale. In my study, the reliability test results were consistent with previous studies. For example, Cronbach's

alpha coefficients revealed the following values for the job satisfaction scales: intrinsic (.89), extrinsic (.81), and overall job satisfaction (.92). Thus, the reliability coefficient for measuring the intrinsic, extrinsic, and overall job satisfaction scales met the conventional cut-off of .70 (Nunnally & Bernstein, 1994).

Job Characteristics

Factor analytic results conducted in my study indicated that all five scales of the job characteristics succeeded to load as an independent factor and all items showed high factor loadings as well. Specifically, task identity items loaded strongly on Factor 1 (.871, .862, .794), all task significance items loaded strongly on Factor 2 (.833, .826, .780), three autonomy items loaded strongly on Factor 3 (.814, .809, and .806), and all skill variety items loaded strongly on Factor 4 (.830, .780, and .712). Finally, all job feedback items loaded strongly on Factor 5 (.793, .792, and .695). Thus, these results supported Hackman and Oldham's (1975) dimensionality argument on five job characteristics.

In regard to the five job characteristics, the reliability coefficients in my study were higher than in previous studies. For example, Hackman and Oldham (1975) reported that the internal consistency reliabilities in their research ranged from a high of .71 (skill variety) to a low of .59 (task identity). In general, the results suggested that internal consistency reliability of the scales were satisfactory. Abdel-Halim (1979) measured job enrichment by the five core job characteristics included in the job design model developed and validated by Hackman and Oldham (1975, 1976). In his study, the reliability estimates for these scales ranged from .62 (task identity) to .78 (feedback). In my study, the reliability coefficients for skill variety, task identity, task significance,

autonomy, job feedback, and growth need strength were .80, .83, .82, .81, .75, and .88, respectively. The lowest reliability estimate was found for the job feedback measure, but it was higher than the findings of previous research and still at an acceptable level of .75. ($\alpha > .70$). Thus, each scale reported in Chapter IV was found to be reliable.

Role Conflict and Role Ambiguity

Role conflict and role ambiguity items were subjected to internal consistency reliability analysis by Rizzo et al. (1970). In their study, reliabilities for role conflict ranged from .816 to .82, and role ambiguity ranged from .78 to. 80. Thus, both variables were found to be highly reliable. In addition, the results of their factor analyses revealed that role conflict and role ambiguity emerged as separate dimensions. The intercorrelations between role measures were .25 for one sample and .01 for the other thus indicating that relative independence exists between the role measures (Rizzo et al., 1970). Consistent with Rizzo et al.'s (1970) research, factor analysis was used in my study to test the validity of role conflict and role ambiguity scales. Factor analytic results indicated that role ambiguity (Factor 1) showed a range of loading from .542 to .767. On the other hand, role conflict (Factor 2) showed a range of loading from .582 to .847. These results revealed that the null hypothesis could be safely rejected in my study because the variables in the correlation matrix were uncorrelated. In other words, role conflict and role ambiguity operated as separate constructs as found in Rizzo et al.'s previous research. Reliability test results also yielded similar results to previous research. For example, the reliability coefficients for role conflict and role ambiguity were .82 and .79, respectively. The results presented in Chapter IV indicated that the internal

consistency of each scale was very good or above the .70 reliability threshold. Thus, my results supported Rizzo et al.'s (1970) assumptions that the instruments were reliable.

Growth Need Strength and Role Overload

In my study, the one factor that emerged from factor analysis of the six-item GNS and five-item role overload had an eigenvalue greater than 1.0. The one factor for GNS explained 64% of the variance, and the one factor for role overload explained 70% of the variance. Only one factor emerged from both questionnaires in which all items loaded high on the factor. In addition, the reliability coefficients for GNS ($\alpha = .89$) and role overload ($\alpha = .88$) were very good and above the .70 reliability threshold. These results were consistent with previous research (Hackman & Oldham, 1975; Keser, 2006; Spector & Jex, 1998). Spector and Jex (1998) found an average internal consistency of .82 across several samples. Internal consistency of the scales was also estimated by Keser (2006), a Turkish researcher who reported that internal consistency reliabilities were acceptable (i.e., higher than .70) for all of Spector and Jex's scales. In addition, Spector and Jex combined the results of 18 studies to provide estimates of relations between their scales and other variables in which data indicated convergent validity for the role overload scale. Another one factor variable, GNS, was also found to be reliable and valid by Hackman and Oldham (1975).

Hypotheses Testing Results

Eighteen hypotheses related to the antecedents of affective, continuance, and normative commitment were developed based on the theory and existing research in organizational commitment literature. Antecedents that were examined included personal

characteristics (tenure, education, gender, marital status, number of children, and management level), job characteristics (skill variety, task identity, task significance, autonomy, and job feedback), role characteristics (role conflict, role ambiguity, and role overload), and job satisfaction (intrinsic and extrinsic). In this section, significant and nonsignificant findings of the 18 specific hypotheses are discussed.

Tenure

H_1. Tenure is positively related to each component of organizational commitment (affective, continuance, and normative).

As expected, a positive significant relationship existed between affective commitment and tenure (ß = .151, t = 2.520, p = .012) indicating that as the length of tenure increased among TNP police officers and police supervisors, affective commitment also increased. Contrary to my expectation, however, tenure was not significantly related to continuance and normative commitment.

Based on the literature, there was reason to expect that tenure would relate differentially to affective, continuance, and normative commitment. Hackett (1994) argued that significant positive relationships should be observed for affective commitment as it relates to tenure, but there was little theoretical basis to conclude that a consistent relationship existed between tenure and normative commitment. In other studies conducted by Meyer and Allen (1984), the influence of tenure on organizational commitment was examined and reported to be positively correlated with affective commitment as found in my study; however, tenure did not correlate significantly with continuance commitment. In recent research conducted in Turkey, Sigri (2007) found that

affective commitment was related to tenure that is consistent with my study. Durna and Eren's (2005) research that was conducted in Nigde, a province of Turkey, also suggested that affective commitment was related to tenure. The expected positive relationships between tenure and affective commitment rest on the assumption that seniority reflects opportunities to better one's position within an organization over time.

In my study, another possible reason for the positive relationship between tenure and affective commitment but no significant relationship between tenure and continuance and normative commitment might be attributed to the development of organizational commitment. Because affective commitment refers to the employee's emotional attachment to his or her organization, researchers have suggested that tenure plays an important role in the development of affective commitment. In other words, the number of years spent in a certain organization may develop an employee's affective attachment to the organization (Meyer & Allen, 1997). Continuance commitment develops as a result of any action or event that increases the cost of leaving the organization provided the employee recognizes that these costs have been incurred (Irving et al., 1997; Meyer & Allen, 1997). For some employees, the perceived cost associated with leaving an organization can increase their organizational tenure. For other employees, however, the cost of leaving might not increase. For that reason, tenure is best thought of as a surrogate variable of accumulated investments and perceived alternatives (Meyer & Allen, 1984; 1997). Finally, normative commitment develops as a result of an individual's organizational investment such as training or tuition subsidies or socialization experiences that stress the value of loyalty (Weiner, 1982). As a result, tenure is not

considered as a direct predictor of continuance and normative commitment (Meyer & Allen, 1997).

Education

H_2. Education is negatively related to each component of organizational commitment (affective, continuance, and normative).

A negative relationship existed between the educational level of TNP members and affective, continuance, and normative commitment; however, only continuance commitment had a significant relationship (t = -3.662, p = .000 < .05). Although education was negatively related to affective and normative commitment, these relationships were not significant at the .05 level.

Similar to my findings, Mayer and Schoorman (1998) reported a negative relationship between education and affective and continuance commitment. However, education was more highly correlated with continuance commitment when compared to affective commitment. My study also supported Ahmad and Bakar (2003) who investigated the relationship between training variables and various aspects of organizational commitment (e.g., affective, continuance, normative, and overall commitment). According to their results, level of education was the second most important reason after training for employees wanting to stay or leave their organizations. Even if overall organizational commitment did not indicate a negative relationship with level of education, education was negatively related to continuance commitment.

Contrary to my findings, Atak (2009) found a positive relationship between level of education and organizational commitment among members of the Turkish National

Police and reported that a higher educational level (i.e., doctorate degree) increased organizational commitment. Atak, however, did not look at the level of education as an individual variable but rather combined educational degree, years in current position, and mentoring relations to predict organizational commitment. Thus, the positive relationship obtained in his study with the effect of years in the current position and mentoring relations may not have yielded the same positive result if level of education had been considered as an individual independent variable.

Contrary to my results, Chughtai and Zafar (2006) found that level of education was not significantly related to organizational commitment in a study conducted in Pakistan. Similarly, neither Hogan et al. (2006) nor Henkin and Holliman (2009) found level of education to be significantly correlated, and Robertson et al. (2007) did not find a correlation between educational level and commitment among municipal employees in three Chinese cities. Finally, Ors et al. (2003) did not report a significant relationship between the level of education and organizational commitment among Turkish nurses and doctors when the level of their commitment changed in accordance to their various personal characteristics.

An explanation for the findings in my research is that those with low education levels may be unlikely to have skills transferable to other organizational setting. On the other hand, higher education may increase mobility because a high education level or advanced technical certification adds value to an employee as a human resource. Mowday, Porter, and Steers (1982) argued that employees with a high educational level have high expectations for their career and certain organizations may not be able to fulfill

those expectations. Employers use education as a screening tool to select workers who are more likely to be productive, so more educated employees would more easily find alternative employment. Education increases the perceived ease of movement, thus reducing continuance commitment. The finding of this research is consistent with the study of Allen and Meyer (1990) who found that education was more negatively related with continuance commitment. Wahn (1998) also revealed a negative relationship between education level and continuance commitment in her research based on Allen and Meyer's (1990) continuance commitment scale.

Gender

H_3. There is a significant difference between females and males in regard to affective, continuance, and normative commitment.

Contrary to expectations, the results revealed that there was no significant difference between females and males in regard to affective, continuance, and normative commitment (p = .097, .385, .160 > .05).

My finding was consistent with Bruning and Synder's (1983) research that analyzed gender as an antecedent of organizational commitment among 583 social service organization employees. The results of simple correlation and multiple hierarchical regression analyses revealed that gender was not a predictor of organizational commitment. The researchers presumed that their results would generalize best to public sector organizations and particularly those in which women have been traditionally employed. However, gender differences may not exist in every organization, and employers should not assume that such differences occur. Gasic and Pagon's (2004)

research also produced similar results to my study. For example, they conducted a study in the largest Slovenian regional police unit to ascertain the influence of personal characteristics on organizational commitment. Respondents were sworn and uniformed police officers from 16 police stations and a criminal investigative unit. Results indicated that gender did not make a significant difference in terms of organizational commitment.

In more recent studies conducted by Joiner and Bakalis (2006) and Lambert et al. (2008), gender was also not associated with either affective commitment or continuance commitment. In the same vein, Turkish researchers who included private and public sector employees in their studies did not find any significant correlation between gender and affective, continuance, and normative commitment (Boylu, et al., 2007; Durna & Eren, 2005; Ors et al., 2003; Sigri, 2007).

Findings of my study contradict the findings of Mathieu and Zajac (1990) who reported that women are generally more committed to their organization than men. Similarly, Angle and Perry (1981) and Hrebiniak and Alluto (1972) found that women were more committed than men, although other researchers reported that men were more committed than women (DeCottis & Summers, 1987; Reyes, 1989). To support the belief that women exhibit higher commitment than men, Wahn (1998) used the continuance commitment scale developed by Meyer and Allen (1984). In a comparison group between men and women, women reported a significantly higher continuance commitment than their male counterparts. Citing from Grusky (1966) who contended that females face greater barriers than males when seeking employment, Wahn gave this as a possible explanation for the high continuance commitment of females. She maintained that having

to overcome barriers, women would be more committed to continue the employment relationship. Wahn's research findings suggested that women may feel tied more to an organization than males due to their feeling that they need to stay. As Meyer and Allen (1991, 1997) described, continuance commitment refers to an employee being tied to an organization because he or she needs to remain. Similarly, according to Mowday et al. (1982), women may be more committed to an organization because they have had to overcome more barriers in order to attain their positions. Another explanation is that not only do women have to overcome more obstacles to become an organizational member, but they are also faced with fewer employment options.

These inconsistent results can be explained by the job and gender models. According to the job model, commitment between women and men varies only when they have different organizational experiences. The job model concludes that there are no differences in the work attitudes of women and men, and that work attitudes of both genders are established in similar ways (Loscocco, 1990). On the other hand, the gender model states that women have different levels of commitment because their emphasis on family roles is greater than that of men. For example, women tend to focus more on family roles as a result of their socialization that produces different orientations and affects the role and importance of the work (Aven et al., 1993). Men's socialization, on the other hand, leads them to identify themselves as independent, assertive, and goal-directed (Marsden et al., 1993). They see their roles in the organization as central to their self perception. This model assumes that women are predisposed to be less affectively committed to their organizations than are men (Dodd-Mc-Cue & Wright, 1996).

Marital Status

H_4. Marital status is positively related to affective and continuance commitment but negatively related to normative commitment.

Contrary to expectations, the hierarchical regression results indicated that marital status was not significantly related to affective, continuance, and normative commitment at the .05 level. Similar results occurred in studies conducted by Mottaz (1987) and Meyer and Allen (1997). Mottaz's study indicated marital status, like other demographic variables, had no effect on organizational commitment. Similarly, Meyer and Allen (1997) reported that marital status did not appear to be consistently related to any component of organizational commitment. According to Mathieu and Zajac (1990), little theoretical work has been devoted to specifying why marital status may be related to organizational commitment. However, a possible explanation for these results might be that the potential effects of marital status may be indirect through other variables (Mottaz, 1987). In other words, the relation between marital status and affective, continuance, and normative commitment might be moderated by other organizational or personal factors (Meyer & Allen, 1997).

In contrast to Meyer and Allen's study (1997), marital status has been found to be a consistent predictor of organizational commitment. For example, married individuals have been reported to be more likely committed to their organizations than unmarried employees (Hrebeniak & Alutto, 1972; Mathieu & Zajac, 1990; Meyer & Allen, 1988; Tsui et al., 1994). According to Joiner and Bakalis (2006), marital status and/or family responsibilities are often referred to as kinship responsibilities in the literature. Kinship is

defined as the degree of an individual's obligation to immediate relatives in the community (Iverson & Buttigieg, 1992). The main focus of kinship is on an employee's economic obligations to take care of children or other dependent variables (Beeman et al., 2000). Thus, employees who have greater kinship responsibilities are more dependent on their organization to fulfill their financial needs which should lead to greater affective, normative (due to the need to reciprocate to the organization), and continuance commitment (Iverson & Buttigieg, 1999). However, this notion was not found to be evident in my research.

Number of Children

H_5. Number of children is positively related to affective and continuance commitment but negatively related to normative commitment.

The results of hierarchical regression indicated that TNP respondents who had more children made a significant positive contribution to the variance in normative commitment ($t = 2.431$, $p = .015 < .05$); however, no significant correlation was found between number of children and affective and continuance commitment.

Similarly, having more children had differential impacts on normative commitment in Iverson and Buttigieg's (1999) study. For example, the relationship with normative commitment was found to reflect the work/family conflict that employees experience. Employees with increased family obligations showed lower moral obligations to stay in the organization. In other words, employees may have resolved their conflict by choosing to satisfy family needs over organizational needs. However, employees were also more likely to stay in the organization when they perceived low alternative job

opportunities. According to Iverson and Buttigieg, the cost of leaving binds the employee to his or her organization, and employees rely on the organization as means of fulfilling important kinship obligations when this is the case.

Job Characteristics

H_6. Skill variety is positively related to affective and normative commitment but negatively related to continuance commitment.

H_7. Job feedback is positively related to each component of organizational commitment (affective, continuance, and normative).

H_8. Autonomy is positively related to affective and normative commitment but negatively related to continuance commitment.

H_9. Task identity is positively related to each component of organizational commitment (affective, continuance, and normative).

H_{10}. Task significance is positively related to affective and normative commitment but negatively related to continuance commitment.

Of the five job characteristic variables, only autonomy (Hypothesis 8) (ß = .80, t = 2.079, p = .038) and task significance (Hypothesis 10) (ß = .137, t = 3.726, p = .000) were found to be positively and significantly related to affective commitment. The remaining three variables (skill variety, task identity, and job feedback) produced nonsignificant relations to affective commitment (Hypotheses 6, 7, and 9).

For continuance commitment, a negative relationship was found for autonomy (Hypothesis 8) (ß = -.82, t = - 2.085, p =.037). The other four job characteristics (skill

variety, task identity, task significance, and job feedback) (Hypotheses 6, 7, 9, and 10) were not found to be statistically significant. As for normative commitment, the only significant relationship found for the job characteristic variables was task significance (Hypothesis 10) (ß = .100, t = 2.923, p = .004).

These results partially supported Mathieu and Zajac (1990) who found a significant and positive relationship between autonomy and affective commitment. In addition, Hackman and Lawler (1971) and Hackman and Oldham (1975) maintained that employees who exhibit more self determination in performing their roles have favorable attitudes toward their jobs, display more responsibility toward meeting organizational goals, and show higher affective commitment. In Allen et al.'s (2004) study, job autonomy had a statistically significant correlation to affective commitment thus confirming that autonomy is an important determinant of affective commitment. Iverson and Buttigieg (1999) and Allen and Meyer (1990) also reported a positive relationship between autonomy and affective commitment but a negative relationship between autonomy and continuance commitment. Allen and Meyer, however, did not find any relationship between autonomy and normative commitment.

The negative relationship found between autonomy and continuance commitment can be explained by understanding how these constructs were developed. As identified by Hackman and Oldham (1975, 1980), autonomy is the degree to which the job provides substantial freedom of independence and discretion to the individual in scheduling work. In addition, continuance commitment is a result or action that increases the costs of leaving an organization (Meyer & Allen, 1997). Thus, employees tend to exhibit a weak

sense of continuance commitment if they recognize that they have more alternative options to leave their organization.

An explanation for the positive relationship between affective commitment and autonomy may be that most employees like to have a certain degree of control in what they do and how they accomplish a given task. Conversely, employees who have little say in how they perform their jobs and related tasks will likely be more frustrated, thus leading to a decrease in positive job outcomes. Therefore, researchers have argued that employees should be more willing to identify with and extend an effort towards those organizations which provide their employees with a higher degree of control over the job, and as such, become more committed (Allen et al., 2004).

Consistent with my study, task significance was found to be positively related to affective commitment by Dunham and associates (1994). Similarly, Schneider (2003) found task significance to be positively related to affective and normative commitment but negatively related to continuance commitment. The findings of his study also revealed that task significance was negatively related to continuance commitment; however, the relationship was not statistically significant. This finding can be explained by Dunham et al.'s argument. For example, to the extent that employees believe that task significance would be higher in their present job than in an alternative one, these employees would possibly view this as something that would be sacrificed if they left the organization. From another point of view, if task significance was perceived as being present in many other jobs, the relationship with continuance commitment would be low. However, Dunham et al. did not investigate the relationship between job characteristics

and continuance commitment since they believed it would be unlikely that task characteristics would be related to continuance commitment.

Motivating Potential Score

H_{11}. Motivating Potential Score (MPS) is positively related to each component of the organizational commitment (affective, continuance, and normative commitment).

Hypothesis 11 was not tested because MPS was highly correlated with one or more job characteristics. As discussed in Chapter IV, MPS was dropped from further analyses due to the problem of multicollinearity (Tabachnick & Fidell, 2007).

Growth Need Strength

H_{12}. Growth Need Strength (GNS) will moderate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, feedback) and each component of organizational commitment (affective, continuance, and normative).

The results of SPSS macro in my study revealed that GNS negatively moderated the relationship between task identity and affective commitment. However, results did not find GNS to be a moderator between the other focal independent variables of skill variety, task significance, autonomy, and job feedback and affective commitment. Also, GNS negatively moderated the relationship between skill variety and continuance commitment. Results did not find GNS to be a moderator between the other focal independent variables of task identity, task significance, autonomy, and job feedback and continuance commitment. Finally, the findings revealed that GNS was a moderator between autonomy and normative commitment and between job feedback and normative commitment. Results did not find GNS to be a moderator between the other focal

independent variables of skill variety, task identity, task significance and normative commitment.

The moderating effect of GNS on the relationship between skill variety and affective commitment approached significance in a negative direction of the hypothesized statement. Skill variety is the degree to which a job requires a variety of different activities in performing work that involves the use of a number of different employee skills and talents (Hackman & Oldham, 1980). A possible explanation could be that as levels of the variety of tasks arise, the opportunity to master certain skills and bodies of knowledge declines, essentially creating a situation where employees who express high levels of skill variety feel that they represent "a jack-of-all-trades." Therefore, when police officers and police supervisors are involved in a wide variety of activities, they may be less likely to feel the strong sense of accomplishment that comes from achieving a high level of proficiency and expertise in one or a few skills (Hunter, 2006). In this workplace setting, officers with high levels of GNS may feel that they are experiencing too much variety, and therefore may become less affectively committed to their organization because they do not have time to master new skills.

Task identity is the extent to which employees perform an entire piece of work from beginning to end rather than working on an isolated task (Hackman & Oldham, 1980). Continuance commitment suggests that employees desire to keep their relationship with the organization due to the cost of leaving and not because of an emotional attachment (Ketchand & Strawser, 2001). In other words, employees who are high in continuance commitment stay with the organization because they have to (Meyer &

Allen, 1991). In my study, I found little literature on the role that task identity plays as a predictor of organizational commitment (Steers, 1977) and almost no literature on either the role of task identity as a predictor of continuance commitment or the role of GNS on the relationship between task identity and continuance commitment. Regarding task identity, results of my study demonstrated that GNS moderated the relationship between task identity and continuance commitment. However, it was in an opposite direction to the hypothesized statement. Such a negative effect may be attributed to the following reason. To meet a higher environmental demand or broader task identity, officers who have high levels of GNS are required to elevate their ability. Thus, the likelihood that these officers will not stay with the organization will be related to the magnitude and number of side bets they recognize. The perceived availability of alternatives will be negatively correlated with continuance commitment. However, employees who have low levels of GNS might encounter difficulties and resist increasing their ability. For these officers, leaving the organization indicates that they would stand to lose or have wasted the time, money, or effort that was invested. As a result, the fewer viable alternatives that employees believe are available, the stronger will be their continuance commitment to their current organization.

Results also revealed that GNS positively moderated the associations between both autonomy and job feedback and normative commitment. Growth need strength is such that a high level among police officers and police supervisors should report more normative commitment in conjunction with autonomy and job feedback. Although there have been no studies conducted to examine the moderator effect of GNS between job

characteristic variables of autonomy and job feedback and normative commitment, these results are compatible with the job characteristics model. Recall that employees who exhibit high levels of growth need strength respond more positively to a job that has high levels of the five job characteristics than individuals who have low levels of growth need strength. In other words, the level of GNS moderates the relationship between job characteristics and work outcomes such that employees with higher levels of GNS will have a stronger relationship between job characteristics and positive work outcomes. On the other hand, employees with lower levels of GNS will experience a weaker relationship between job characteristics and expected positive outcomes (Hackman & Oldham, 1980). As a result, when the level of GNS is low, autonomy may lead individuals to feel neglected, perhaps even abandoned by their organization, which may reduce the level of normative commitment and increase their continuance commitment. As Meyer et al. (1990) argued, normative commitment is increased "by the receipt of benefits from the organization that creates a sense of obligation to reciprocate" (p. 83). When the organization provides autonomy to officers in high growth need strength, these officers feel morally indebted to their organization even if their personal dispositions or job characteristics give them the feeling of having a degree of independence from superiors.

For the relationship of job feedback with normative commitment, employers with higher levels of GNS reported greater normative commitment as their ratings of job feedback rose than did employees with lower levels of GNS. As defined in Chapter II, job feedback is the degree to which carrying out the work activities required by the job

results in the employee obtaining direct and clear information regarding the effectiveness of his or her performance environment (Hackman & Oldham, 1975). Growth need strength is the employee's need for personal growth, development, and accomplishment in the work environment (Hackman & Oldham, 1975). The moderating effect of GNS on the relationship between job feedback and normative commitment may be a result of the reinforcement that job feedback provides for the employees' sense of accomplishment as well as the extent of their learning and development. Positive or negative feedback from the job itself could also reinforce employees' perceptions that they are learning new things, they are creative, and they are developing the areas of knowledge and skills (Hunter, 2003).

Role Ambiguity and Role Conflict

H_{13}. Role ambiguity is negatively related to affective and normative commitment but positively related to continuance commitment.

H_{14}. Role conflict is negatively related to affective and normative commitment but positively related to continuance commitment.

As expected, role ambiguity was inversely related to affective commitment and normative commitment in my study. However, role ambiguity was not significantly related to continuance commitment. The results that role ambiguity was significantly and negatively related to affective and normative commitments indicated that those who perceive high levels of role ambiguity and currently remain in the Turkish National Police do so either because they want to (affective commitment) or because they ought to (normative commitment). In other words, they would be less willing to remain in this

organization. Based on empirical results from the literature and as expected, role conflict was negatively related to affective commitment and positively related to continuance commitment; however, the relationship between role conflict and normative commitment was not significant.

These results are largely consistent with previous research. For example, Billingsley and Cross (1992) identified variables that influence commitment among both general and special educators. Separated regression analyses were used in their study to regress commitment on role conflict and role ambiguity. Consistent with my study, the researchers reported role conflict and role ambiguity to be negatively related to commitment among general and special educators.

In another study, Michaels et al. (1988) investigated a model in which organizational formalization affected work alienation through role ambiguity, role conflict, and organizational commitment. As the researchers expected, higher levels of role conflict and ambiguity were correlated with lower levels of organizational commitment. This resulting pattern was identical in their two different samples. Yousef (2002) conducted research in the United Arab Emirates in order to investigate the direct and indirect effects (mediating role) of role stressors, namely role conflict and role ambiguity on affective, continuance, and normative commitment. As hypothesized in his study, the researcher reported that role conflict was negatively related to affective and normative commitment, but positively related to continuance commitment. Also, a significant negative relationship was reported between role ambiguity and affective and

normative commitment. Like role conflict, role ambiguity also was positively related to continuance commitment.

In contrast to the above results and findings reported in my study, opposite findings have also been reported by organizational commitment researchers who found either a positive relationship between role conflict and role ambiguity and components of organizational commitment or the relationships between the variables were not statistically significant (Gregersen & Black, 1992; LeRouge et al., 2006; Manheim & Papo, 2000). For example, Gregersen and Black's findings did not approve the hypothesized negative relationship between role ambiguity and commitment. As they argued, it might be that the jobs of upper level managers in their overseas assignments studied in a parent country are by nature ambiguous, and the managers may accept this ambiguity without a significant effect on commitment. On the other hand, results supported the negative relationship between role conflict and commitment to affective and normative commitment. In contrast to the common view, Jaramillo et al. (2005) also did not find role conflict and role ambiguity to be significant predictors of organizational commitment. Partial correlations between role conflict and role ambiguity with organizational commitment were insignificant as well.

The impact of role conflict and role ambiguity on organizational commitment variables may be positive when employees have clear and challenging job assignments. However, the impact on organizational commitment will be negative (Mowday et al., 1982) when assignments become ambiguous or place the employee in conflict. Put another way, lack of direction and clarity by management will generally result in role

conflict and role ambiguity. It may be hard for an employee to attach himself or herself to an organization when he or she is adrift in a difficult job such as police work because he or she does not receive clear directions or receives conflicting orders from supervisors (Hogan et al., 2006). Accordingly, greater levels of role conflict and role ambiguity lead to lower affective and normative commitment but higher continuance commitment. As stated earlier, continuance commitment is based on the perception of the costs involved in leaving an organization. When employees feel negatively about their organization or they experience high role conflict and role ambiguity, they might consider leaving the organization. However, high role conflict and role ambiguity may make these employees pay greater attention to the costs which they would have to pay in leaving the organization. These perceived costs might increase continuance commitment toward the organization.

Role Overload

H_{15}. Role overload is negatively related to affective and normative commitment but positively related to continuance commitment.

Contrary to expectations, no relationship was found between role overload and the dependent variables of affective, continuance, and normative commitment. Consistent with these results, Karsh et al. (2005) did not find any significant relationship between role overload and affective commitment. Similarly, Curry et al. (1986) reported that role overload was not related to organizational commitment; however, it had a significant effect on job satisfaction.

On the other hand, a majority of researchers who have examined the association between role overload and organizational commitment variables generally found a negative relationship between role overload and affective and normative commitment but a positive relationship with continuance commitment. Wiley (1987) reported that role overload was significantly and negatively related to organizational commitment. According to Stevens et al. (1978), role variables hold more dynamic aspects of the job situation that may make staying with a given organization more or less attractive at a given point in time. As such, work overload would be perceived as a liability and thus negatively affect commitment. Using role and exchange theory, when Stevens et al. examined commitment, they found that role overload was negatively related to organizational commitment as predicted. In fact, role overload emerged as the largest negative predictor in their study providing support to the exchange or side bet approach to commitment. The research indicated that managers have low commitment when they perceive of themselves as having too little authority to carry out their responsibilities, are bothered by role overload, and must finish the work of others.

When employees feel role overload and have thoughts of emotional exhaustion, they usually sense that they cannot work effectively in fulfilling their responsibilities and commitment to their organization. Thus, role overload in the workplace may result in becoming less effectively committed to the organization. In addition, an employee who is experiencing high role overload may also have high continuance to the organization because of inducements offered (i.e., retirement fund, status within the organization, et cetera) (Riley, 2006).

As Riley outlined (2006), the unexpected results in my study in regard to role overload may be based on individual personality differences. Role overload or work overload is very subjective in its meaning and what is considered too much for one employee may be considered as perfectly reasonable by another. Thus, employees may vary in their experiences of and reaction to the same role overload because of their personality differences. An alternative explanation why role overload was not significantly related to affective, continuance, and normative commitment could be that some situational and dispositional factors in the Turkish National Police could moderate the feelings of role overload for the sample of police officers and supervisors.

Intrinsic and Extrinsic Job Satisfaction

H_{16}. Intrinsic, extrinsic, and overall job satisfaction are positively related to affective and normative commitment, but negatively related to continuance commitment.

The results of the analysis indicated that intrinsic job satisfaction and extrinsic job satisfaction were significantly and positively related to both affective and normative commitment. Although, both satisfaction variables also were positively related to continuance commitment, this positive relationship was not statistically enough to support the hypothesis. The significant positive correlation between both intrinsic and extrinsic job satisfaction and affective and normative commitment confirm the findings reported by Yew (2008). Hierarchical regression results in Yew's study revealed that intrinsic and extrinsic facets of job satisfaction had a significant positive relationship with affective and normative commitment. However, when continuance commitment was

entered into the model, all facets of job satisfaction did not indicate a significant relationship with continuance commitment.

Consistent with my research, Clugston (2000) found job satisfaction to be positively related to affective and normative commitment. However, the researcher also reported that job satisfaction had a significant positive relationship with continuance commitment. As Clugston suggested, the reason for the positive relationship between job satisfaction and continuance commitment could be due to the composite nature of the scales that contained items which tapped into an individual's satisfaction with his or her salary. Because some of the continuance commitment scales asked the subjects if it would be too costly to leave their current organization or if they believed another organization could not match their overall benefits, a measure of job satisfaction that included satisfaction with pay may likely have had a positive effect on continuance commitment. Briefly, Clugston`s research provided support for the conclusion that increased job satisfaction leads to a significant decrease in continuance commitment thus indicating that an employee who is satisfied with his or her job is less likely to feel compelled to stay with their organization.

Recall that the positive relationship found between the facets of job satisfaction and continuance commitment was not statistically significant in my study which is consistent with the rationale that continuance commitment represents. Essentially, employees are committed to the organization, not for reasons of emotional attachment or obligation, but because of recognition that the costs associated with doing otherwise are too high (Schneider, 2003). Recall also that findings in my study revealed that increased

intrinsic and extrinsic job satisfaction led to significant increases in affective and normative commitment. These results indicate that employees who are happy with their jobs are more willing to remain in the organization, and those who are currently remaining with the organization, either because the cost of leaving is too high or due to a lack of job alternatives, would also be willing to remain, not because they have to but because they want or they ought to. As Boehman (2006) concluded, these results could indeed be generalized for many work environments, as in previous studies conducted by Allen and Meyer (1996) and Meyer and colleagues (2002) in a wide variety of work settings.

As mentioned previously, because of the multicollinearity problem (Tabachnick & Fidell, 2007), the influence of overall job satisfaction to the model was not examined.

Overall Job Satisfaction (Mediator)

H_{17}. Overall job satisfaction will mediate the relationship between job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and each component of organizational commitment (affective, continuance, and normative).

As discussed in Chapter II, although satisfaction and commitment are very popular topics in the study of work related attitudes, there is contradiction in terms of causal relationship (Testa, 2001). The majority of theoretical and empirical evidence proposed that job satisfaction is an antecedent to organizational commitment (Brown & Peterson, 1993; Buchanan, 1974; DeCottis & Summers, 1987; Harrison & Russell, 1998; Reichers, 1985; Vandenberg & Lance, 1992; Yousef, 2001); however, Bateman and

Strasser (1984) suggested that the reverse causal ordering may be true. A third position considered the relationship as being reciprocal (Lance, 1991; Price & Mueller, 1981). Of the above positions, the most widely accepted one among researchers is that job satisfaction is an antecedent of organizational commitment (Mowday et al., 1982; Vanderberg & Lance, 1992) as was tested in Hypothesis 16.

It was also hypothesized in my study that overall job satisfaction will mediate the relationship between the job characteristics and three components of organizational commitment. This was based on the position or of Model 4 which found the relationship between job satisfaction and organizational commitment to be more complex than expected (Billingsley & Cross, 1992; Farkas & Tetrick, 1989; Meyer & Allen, 1997). According to this point of view, the rationale for the absence of a job satisfaction-organizational commitment causal relation is that job satisfaction and organizational commitment are correlated due to the effects of common causal variables of job characteristics (James & James, 1989; Lance, 1991). Mathieu and Zajac argued that (1990) although several studies including mine were conducted to determine the relationship between job characteristics and organizational commitment, no theoretical models have been proposed to explain why they should be related. Most researchers have drawn upon Hackman and Oldham's (1976) job characteristic model to suggest that enriched jobs are likely to yield higher organizational commitment. However, it is not clear whether enriched jobs are likely to directly increase organizational commitment or if such an impact is mediated by job satisfaction.

My study filled this void in the literature by assessing the mediating affect of overall job satisfaction between the job characteristics of skill variety, task identity, task significance, autonomy, and job feedback and affective and normative commitment. As previously mentioned, since mediation conditions did not exist for continuance commitment (Tepper et al., 1996), Hypothesis 17 was not tested for this dependent variable. Findings of my study revealed that the indirect effect of skill variety, task identity, task significance, autonomy, and job feedback on both effective and normative commitment through overall job satisfaction was significantly different from zero at $p < .05$. Thus, overall job satisfaction was a mediator between the five job characteristics and the dependent variables of affective and normative commitment. The results that overall job satisfaction mediates the influences of five core job characteristics on affective and normative commitment suggest that officers who perceive higher levels of skill variety, task identity, task significance, autonomy, and job feedback would be more satisfied with the job and consequently more willing to remain in the organization either because they want or they ought to.

Management Level

H_{18}. There is a significant difference between first and mid-level supervisors and police officers in regard to affective, normative, and continuance commitment.

There have been no studies in TNP which have reported the differences between supervisory and nonsupervisory positions in regard to levels of affective, continuance, and normative commitment. Also, the previous organizational commitment research has indicated mixed results regarding the levels of organizational commitment between

supervisory and nonsupervisory positions. For example, Laka-Mathebula (2004) did not find significant differences between positions. According to the researcher, the non-significant differences can be attributed to the low number of some of the different groups in the sample. Luthans et al. (1985) also did not find any significant differences in the levels of organizational commitment between supervisory and nonsupervisory employees. This finding was surprising because the researchers expected that supervisory employees would be more committed to their organization due to their high level than nonsupervisory employees. In a sample of Australian police officers and police supervisors, Savery et al. (1991) examined the commitment level differences and reported that officers with the rank of sergeant had significantly lower levels of organizational commitment than lower ranking officers. As opposed to Savery et al., Sneed and Herman (1990) reported that supervisors had higher commitment scores than did nonsupervisory employees.

Consistent with expectations, my study indicated that there was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level supervisors and between first level supervisors and police officers. Contrast estimate results indicated that police officers reported low affective and normative commitment but higher continuance commitment when compared to mid-level supervisors. Contrast estimate results also indicated that first level supervisors had higher affective and normative commitment but lower continuance commitment to their organization when compared to police officers. In my study, I expected to find significant differences between respondents at different levels of the hierarchy. In other words, it

was expected that police supervisors who held positions with higher levels of responsibility, decision-making, and accountability would report stronger affective and normative commitment. According to Stebbins (1970), affective commitment is largely formed as an emotional response on the basis of rewards, whereas continuance commitment is an emotionally neutral response that is impacted by the existence of penalties associated with either the intention or decision to discontinue membership with the organization. Normative commitment develops on the basis of a particular kind of investment that the organization makes in the employee, specifically, investments that appear difficult for employees to reciprocate (Meyer & Allen, 1997). Holding a high supervisory position in the TNP is an investment because over an extended period of time these positions may result in some loss of competence that will limit alternatives. Supervisory positions are also a reward from TNP and are an indication that his or her work is being recognized, which should enhance an attachment and obligation to the organization. On the other hand, if police officers opt to leave the organization, they would stand to lose or have wasted the time, money, or effort that was invested. Simply stated, police officers must pay greater attention to the costs that they would have to pay in leaving the organization which might increase their continuance commitment toward the organization.

Theoretical and Policy Implications

On the whole, findings of my study revealed important theoretical, policy, and practical implications that will contribute to the police commitment literature. Through an examination of the various aspects of organizational commitment and an in-depth

investigation of the relationships between specific variables to components of organizational commitment, my study was designed to help researchers understand all aspects of organizational commitment from the perspective of police officers and police supervisors. From a practical point of view, my study is expected to be a significant tool for policy makers in police organizations, more especially in the TNP.

Theoretical Implications

Organizational Commitment

The findings provided evidence to the notion that Meyer and Allen's (1991) 3-component model of organizational commitment can be extended to an international Turkish National Police setting. For example, individuals can feel bound to an organization for three different reasons: (a) because they want to (affective commitment); (b) because they feel they have to (continuance commitment); or (c) because they feel they ought to (normative commitment). The most popular multidimensional model of organizational commitment was that of Meyer and Allen (1984) based on Becker's (1960) side bet model. Meyer and Allen initially introduced two dimensions of organizational commitment: (a) affective attachment or affective commitment and (b) cost attachment or continuance commitment. Thus, organizational commitment was considered to be a bidimensional concept that included an attitudinal aspect as well as a behavioral aspect. After continued research, Meyer and Allen (1991) added another dimension labeled obligation or normative commitment. Therefore, they held that organizational commitment was a multidimensional construct comprised of three components: (a) affective, (b) continuance, and (c) normative.

In my study, factor loading of organizational commitment variables included affective commitment (Factor 4), continuance commitment (Factor 3), and normative commitment (Factor 2). All normative commitment items showed high loadings on their factors, and because, as expected, affective and normative commitment scales generally correlated with the proposed antecedent variables has provided evidence that they are valid measures of commitment and may therefore be useful tools in future research.

However, more evidence is required before the continuance commitment scale can be used with as much confidence. The concern with the continuance commitment scale has also been identified in other studies that have used this scale. According to Gonzalez and Guillen, (2008), however, whether continuance commitment is really a commitment is questionable. For example, Ko et al. (1997) argued that even if continuance commitment explains why people remain in an organization, it is not a real commitment. In addition, McGee and Ford (1987) reported that the two dimensions of continuance commitment, high sacrifice and low alternatives, were significantly and differentially related to affective commitment. More specifically, high sacrifice indicated a positive relationship and low alternatives showed a negative relationship to affective commitment. According to Iverson and Buttigieg (1999), combining the two subscales into an overall scale of continuance commitment may suppress the effects of each subscale thus leading to spurious results.

Although Meyer and Allen's (1991) 3-component model of organizational commitment can be extended to an international setting, it remains to be seen whether these scales can be extended to all international applications without additional testing

and validation. In so far as the Turkish setting was concerned, the scales were applicable to TNP in general and to police officers and supervisors specifically. Therefore, Turkish police managers and administrators who wish to examine their subordinates' commitment to the organization can confidently apply multidimensional scales in their workplace. However, researchers must be cautious in how they measure organizational commitment, because results may change depending on how organizational commitment is to be measured. Researchers and police administrators alike must also be aware that there are different components of organizational commitment and antecedents that can also change depending on the type and level of commitment.

Job Satisfaction

The causal ordering of job satisfaction and organizational commitment had a significant theoretical implication in which four positions were suggested: (a) facets of job satisfaction are antecedents to organizational commitment (Brown & Peterson, 1993; Buchanan, 1974; DeCottis & Summers, 1987; Harrison & Russell, 1998; Reichers, 1985; Vandenberg & Lance, 1992; Yousef, 2001); (b) organizational commitment is an antecedent to job satisfaction (Bateman & Strasser, 1984); (c) the relationship is considered as being reciprocal (Lance, 1991; Price & Mueller, 1981); and (d) the relationship between job satisfaction and organizational commitment is more complex than expected (Billingsley & Cross, 1992; Farkas & Tetrick, 1989; Meyer & Allen, 1997). Results indicated that a significant portion of the variance in affective and normative commitment can be explained by intrinsic and extrinsic job satisfaction that appears to be a significant theoretical contribution. This was because it is important to

understand the causal ordering of each facet of job satisfaction and organizational commitment variables in order to apply the appropriate management strategies that will ensure organizational success.

Gender

Findings of organizational commitment pertaining to gender that endorsed the job model was another theoretical implication. Through a review of related literature, two approaches offered explanations for understanding the inconsistent results concerning gender and organizational commitment. In the first model labeled as the gender model, women are assumed to have different levels of commitment because they generally place greater emphasis on family roles than do men. According to Aven et al. (1993), women tend to focus more on family roles as a result of their socialization which produces different orientations that affect their roles and importance of their work. On the other hand, the socialization process in men often leads them to identify themselves as being independent, assertive, and goal-directed (Marsden et al., 1993). In other words, they tend to see their organizational roles as central to their self perception. Thus, the gender model assumes that women are predisposed to show less affective commitment to their organizations than men (Dodd-McCue & Wright, 1996). In contrast to the gender model, affective commitment is a function of the work environment in the job model (Aven et al., 1993). Accordingly, affective commitment between women and men in the job model varies only when they have different organizational experiences. According to Loscocco (1990), there are no differences in the work attitudes of women and men that are established in similar ways by both genders.

Although findings on organizational commitment for gender approved the job model in my study, these findings do not suggest that the model will generalize to every type of organization or sample. Rather, it is believed that gender differences in organizational commitment may not occur in every organization or with respect to police managers or administrators; therefore, one should not assume that such gender differences exist. In other words, the existence of potential gender differences should be verified before initiating programs that treat male and female police officers differently. Even if gender differences do exist, however, police managers need to be aware that other relevant factors (e.g., position or management level) may be as important as gender in determining differences that are generally attributed to gender alone.

Job Characteristics

Mowday et al. (1982) stated that much work has been carried out that investigated the relationship between job characteristics and organizational commitment. Here, the basic proposition was that increased job characteristics also increase the challenges that employees experience and as a result increases organizational commitment. According to Mowday et al. (1982), when job scope is viewed as a summary construct of certain core job dimensions (e.g., variety, autonomy, significance, and feedback), that is clearly why higher levels of commitment are often found among employees who have higher job scopes. Thus, these job characteristics may positively affect the behavioral involvement of employees and increase their feelings of responsibility.

Findings of my study indicated that the presence of certain job characteristics (i.e., autonomy and task significance) lead to greater affective and normative

commitment but lower continuance commitment. Consistent with previous research, GNS moderated the relationship between task identity and affective commitment, skill variety, and continuance commitment as well as autonomy and job feedback and normative commitment. Taken together, Hackman and Oldham's (1980) JCM may serve as important theoretical foundations for future research especially on affective and normative commitment.

Policy and Practical Implications

Number of Children

As discussed in the literature review, family responsibilities are often referred to as kinship responsibilities in which kinship is defined as the degree of an individual's obligation to immediate relatives in the community (Iverson & Buttigieg, 1992). In other words, kinship responsibilities relate to an employee's number of dependents. The main focus of kinship is placed on an employee's economic obligations to take care of children or other dependent variables (Beeman et al., 2000). Because employees with greater kinship responsibilities are more likely to be dependent upon their organization to fulfill their financial needs, this should lead to greater affective and normative commitment (due to the need to reciprocate to the organization) (Iverson & Buttigieg, 1999). In light of this theory, Iverson and Buttigieg proposed that employees who are married and have more family responsibilities (e.g., more children) are more likely to have higher levels of affective and continuance commitment. In addition, these employees are more likely to remain in the organization when they perceive lower alternative job opportunities. For

example, the cost of leaving may bind employees to their organization if or when they rely on the organization as a means of fulfilling important kinship obligations.

In recalling that Hypothesis 5 revealed a positive significant impact regarding number of children on normative commitment, this finding suggests that kinship responsibilities are important personal variables. Therefore, policy makers should devise more family-friendly policies in order to provide police officers and police supervisors with feelings of obligation that will give them reason to remain with the organization.

Tenure

Given that findings of my study suggested that increased tenure within the Turkish National Police is associated with an increase of affective commitment, the significance of tenure should not be ignored. The importance of length of service suggests that police officers and police supervisors adapt to their organizational environment over time. In addition, affective commitment was found to be positively related to increased tenure thus suggesting that a police officer or police supervisor becomes more valuable to the organization over time. This finding has an important implication for the Turkish National Police. For example, units in TNP are facing considerable change during the membership process to the European Union (EU); therefore, increasing the levels of affective commitment among its officers could support the introduction of these changes. In brief, experienced members of TNP who are affectively committed to the vision and goals of the organization are more likely to be committed to the changed goals. Managers of police units in which this scenario is not

found may consider interviewing their subordinates in order to provide insight into ways of increasing affective commitment.

Education

Findings related to educational level had practical implications in terms of continuance commitment. As previously discussed, researchers have viewed continuance commitment as a need to remain in the organization due to the costs associated with leaving. Put another way, continuance commitment refers to the employee's calculative or instrumental assessment of perceived utility for remaining with the organization as opposed to leaving (Meyer & Allen, 1997).

The findings of my study revealed that one's educational level was negatively correlated to continuance commitment. This suggests that more educated TNP members (especially supervisors) may have higher expectations that the organization is unable to meet and therefore the member(s) may choose to leave the organization. As one alternative, policy makers might consider developing incentive programs in order to increase continuance commitment among its supervisors. Another alternative is to provide higher job security and job satisfaction.

As Bhuian and Shahidulislam (1996) argued, when employees perceive higher job security and greater satisfaction with jobs in general, the level of their continuance commitment will also be higher. This can also be useful because increasing job security and creating a positive work environment could prove to be economical organizational decisions in terms of reducing costs associated with losing employees. Although it may be difficult to address the perceived level of job security among supervisors, open and in-

time communication may help police supervisors to have a clear picture of the work environment (Buitendach & Witte, 2005). Thus, it is suggested that police managers should focus on recognizing those subordinates who are continuancely committed in an effort to improve morale and dedication to the emotional attachment level that binds subordinates to the organization (Suliman & Iles, 2000).

Job Satisfaction

The relationship between facets of job satisfaction and organizational commitment had both policy and practical implications. Given that job satisfaction was estimated to have the greatest total impact on organizational commitment variables, findings indicated that a strong affective and normative commitment to the Turkish National Police is dependent upon achieving high levels of job satisfaction among its members. The results further indicated that extrinsic and intrinsic rewards in particular are the key predictors of affective and normative commitment. Therefore, the significant association between facets of job satisfaction and affective and normative commitments suggests that TNP members may feel a greater attachment and obligation to stay with the organization when they experience greater job satisfaction with their activities, independence, social status, supervision, moral values, creativity, coworkers, recognition, and achievement. In order to develop affectively and normatively committed police officers and supervisors, managers and administrators should therefore put into place human resource practices that will increase the day-to-day job satisfaction of their subordinates. These human resource practices may include level of pay, accuracy of merit rating system, fairness of promotion, and comparability of fringe benefits.

When considering extrinsic job satisfaction, results indicated that out of all the job satisfaction items that would significantly influence TNP members' affective commitment toward the organization, satisfaction with policies and practices was important to both police officers and supervisors regardless of age and unit. This finding suggests that the organization must consider how its policies and practices can be changed in an effort to increase affective commitment among its members.

Job Characteristics Model

Findings of the JCM had logical policy and practical implications for police officers and police supervisors alike. Specifically, while promoting autonomy and task significance could serve to increase affective and normative commitment among police officers and police supervisors, the same job characteristics could also decrease their continuance commitment. Therefore, police managers should note that efforts to increase skill variety, task identity, and job feedback are unlikely to enhance affective and normative commitment among TNP members. Thus, it is suggested that management or policy makers should take consideration the job characteristics mentioned above as a critical determinant to enhance TNP members' organizational commitment and retain them in the organization. Further, managers should realize that job characteristics, such as task identity, skill variety, and job feedback work interactively with GNS to account for organizational commitment. In other words, taking steps to enhance task identity, skill variety, and job feedback is more likely to increase the GNS of police officers and supervisors in the presence of higher organizational commitment. Therefore, managers

would be wise to carefully assess each officer's level of GNS and policy makers should provide equal growth and development opportunities.

Mediating Role of Overall Job Satisfaction

One step forward made in this study was in regard to the confirmed mediating role and effect that overall job satisfaction plays in understanding the organizational commitment between the job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and the outcome variables of affective and normative commitment. Psychological and organizational researchers have concurred that overall job satisfaction is an important mediating construct in the development of commitment (Mowday et al., 1982). Findings of my study have made a substantial progress to this domain. In other words, overall job satisfaction is now generally understood to be one of the best predictors of organizational commitment. Moreover, job satisfaction and affective and normative commitment are correlated due to the effects of common causal variables (i.e., job characteristics). These findings suggest that efforts to increase job satisfaction and affective and normative commitment of TNP members should be focused on the job five characteristics. Thus, a redesign of programs appears to warrant serious consideration by managers who are concerned with expected problems in the development of job satisfaction and organizational commitment.

Management Level

Findings indicated that there was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level supervisors and between first level supervisors and police officers in the TNP. For

example, police officers reported low affective and normative commitment but higher continuance commitment when compared to mid-level supervisors. On the other hand, first level supervisors had higher affective and normative commitment but lower continuance commitment to their organization compared to police officers. Finally, members in positions with higher levels of responsibility, decision-making and accountability (e.g., superintendent, chief superintendent 4th class, and chief superintendent 3rd class) reported stronger affective and normative commitment. Significant differences were also reported between police officers and sergeants, lieutenants, and captains. Therefore, the gap between the levels of affective, continuance, and normative organizational commitment of supervisory and nonsupervisory positions should be considered as an important concern.

Police managers and administrators should note that commitment levels of police officers can be increased by appropriate management development training. This is important since the application of human resource management policies is implemented through namely first level supervisors who are responsible for managing commitment (Meyer & Allen, 1997).

Role Conflict and Role Ambiguity

The results have revealed that role conflict and role ambiguity influence affective and normative commitment both directly and negatively; thus, it is suggested that police officers and police supervisors who perceive higher levels of role ambiguity and role conflict are less affectively and normatively committed to the TNP. Because these findings have negative consequences for both supervisors and police officers alike,

managers should enhance their ability to develop appropriate strategies to combat the influences of role conflict and role ambiguity on components of organizational commitment. Once the reasons for role conflict and role ambiguity are identified and understood, attempts should be made to reduce them by means of higher affective and normative commitment.

To reduce role conflict, police managers and administrators should first create an environment that is aimed at both police officers and supervisors in addressing specific conflicts by thoroughly training them to better cope with discord. Specifically, police departmental meetings or training sessions can be used to help TNP members identify potential conflicts and be instructed on how to avoid or overcome them. In short, first and mid-level supervisors should be be trained in understanding role conflict and learning how to avoid inflicting conflict on the subordinates under their supervision. In addition, police officers should be trained in coping skills and how to recognize organization changes that might resolve high role conflict.

Second, because management should be concerned with increasing affective and normative commitment among TNP members, attempts should be made to reduce role ambiguity. Otherwise, a lack of necessary information to an assigned organizational position may result in high role ambiguity which will increase the probability that an employee will be dissatisfied with his or her role, will show anxiety, will distort reality, and will thus perform less effectively (Rizzo, et al., 1970). Therefore, training for both police officers and supervisors should be provided to ensure that they will be better able to more accurately define their roles and how they are to perform their duties. In addition,

clearly defined organizational policies and practices as well as periodic feedback should help TNP members to determine the crucial tasks that are required of them. Thus, expectations of police officers' role partners should be identified and communicated through internal meetings and training sessions with their managers. As such, positive managerial action may create an environment that will help to lessen role ambiguity among TNP members.

Implications for Future Research

My study represents the first known organizational commitment research that has been conducted among TNP police officers and supervisors through use of the conceptualization proposed by Meyer and Allen (1990). In addition, it is the first known study that has addressed the impact that intrinsic and extrinsic job satisfaction, five job characteristics proposed by Hackman and Oldham (1975), role conflict, role ambiguity, and role overload have on organizational commitment among TNP police officers and supervisors. Despite the significant contributions of my study, additional research should be conducted to confirm its findings.

Second, to understand more about specific employee commitment in the TNP, future research may be conducted to analyze the effect of other antecedents on affective, continuance, and normative commitment. As discussed in Chapter IV, the R^2 in my study was relatively low which indicates that the regression model might not possibly include other major antecedents of organizational commitment. In addition, there might be an advantage in exploring commitment across the Turkish National Police where supervisors may hold diverse cultural values that may result in a different set of antecedent conditions

that affect organizational commitment. Thus, other possible antecedents, namely organizational justice, management practices (e.g., selection, training), socialization characteristics (e.g., cultural, familial, et cetera), organizational characteristics (e.g., size, structure, salary) may be considered by future researchers (Meyer & Allen, 1997) as well as individual role characteristics in the organization as suggested by Mowday et al. (1982).

Third, my study revealed very limited support for Hypothesis 12 that stated: "Growth Need Strength (GNS) will moderate the relationship between the characteristics (skill variety, task identity, task significance, autonomy, job feedback) and each component of organizational commitment (affective, continuance, and normative)." Thus, future researchers may want to consider investigating the moderating effect of GNS on the relationship between organizational commitment variables and the motivating potential score (MPS) rather than individual variables of job characteristics. As an aggregate index of job characteristics, MPS is a more powerful predictor of outcome variables than any of the job characteristics (Tepper et al., 1996). Further, Fried and Ferris (1987) reported that the MPS indicates a stronger relationship with psychological states and work outcomes than any of the other individual job characteristics. The researchers argued that the model appears to support the proposal that MPS is a better predictor of dependent variables than is any of the individual job characteristics alone.

Fourth, the consequences of organizational commitment were not examined in my study. Therefore, future researchers may develop a further more complex model that

incorporates both antecedents and consequences of organizational commitment in order to determine the factors that lead to affective, continuance, and normative commitment. In pointing to employee retention, Meyer and Allen (1997) argued that it is logical to expect that affective, continuance, and normative commitment will be related to employee retention if each form of commitment is negatively associated with an employee's intention to leave the organization and with voluntary turnover behavior. Thus, the three components of commitment may have quite different possible consequences for other work-related behavior (e.g., attendance, job performance, citizenship behavior, stress, and employee well-being). Therefore, a meaningful study could be designed to investigate the relationship between the three components of organizational commitment and these outcome variables.

Fifth, to overcome the limitations of mediation and moderation analyses (SPSS macro), structural equation modeling (SEM), a useful statistical technique to understand the relationships among variables, may be used in future research. This would be especially true if causality is being examined. In addition, SEM can model measurement errors, provide fit statistics to evaluate the degree of model-data fit, and simultaneously obtain estimates of all the paths in the model (Tabachnick & Fidell, 2007).

Sixth, organizational commitment has been indicated to have more stability than job satisfaction over time (Mowday et al., 1982). Consistent with Porter et al.'s (1974) conceptual distinction between organizational commitment and job satisfaction, even if typical daily work activities influence the employee's job satisfaction level, these temporary events may not cause an employee to seriously reevaluate his or her

attachment to the overall organization. According to Porter et al., commitment attitudes appear to develop slowly but consistently over time as employees contemplate about the relationship between themselves and their employing organization. In contrast to this development, job satisfaction appears to be a less stable measure over time, reflecting more on immediate reactions to specific tangible job facets, namely pay and supervision. Thus, a longitudinal study may be necessary in order to increase the understanding of the causal relationship between job satisfaction and organizational commitment variables.

Finally, rather than role conflict, role ambiguity, and role overload, other specific police stressors (i.e., lack of promotion opportunities, supervisor support, and group cohesiveness) may be better predictors of organizational commitment in a law enforcement setting. Therefore, future research designed to examine whether or not these predictors are important stressors in the Turkish National Police is recommended.

Limitations

The first limitation concerns the cross sectional nature of my study. Although there were numerous advantages, the cross sectional design is generally inappropriate if the researcher intends to indicate that an independent variable or a set of independent variables result in a given outcome (Creswell, 2003). In other words, the cross sectional research design indicates that the direction of causality cannot be determined because data are collected at a single point in time. Thus, causality among the independent and dependent variables cannot be concluded. According to O'Sullivan et al. (2003), only experimental designs provide the best means of obtaining evidence necessary to infer the existence of a causal link between two well-defined variables. For example, aspects of

job satisfaction or job characteristics over time may be found to have a strong effect on the organizational components of commitment. However, limitations of the cross sectional design was avoided by using statistical analyses to approximate its applications to the experimental design (Nachmias & Nachmias, 2000).

The second limitation entails the survey form. A number of researchers have compared e-mail to mail surveys and concluded that e-mail provides a number of benefits in regard to response quality and speed of response. However, e-mail surveys impose limitations on the questionnaire design that may have impacted the quality of the data collected in my study. These limitations were avoided by including a hyperlink in the e-mail message that opened a Web based form of the questionnaire. Thus, the use of the Web allowed me to use features such as drop down boxes, options, and check boxes in the questionnaire.

Third, the loss of meaning in the research instruments can be seen as a limitation to my study. For example, all research instruments used were originally developed in English, and even if the questionnaires were translated into Turkish, there was the possibility that a slight loss of meaning might have occurred in the translation. Therefore, translation from Turkish to English and back translation were conducted by a translator with appropriate credentials.

Fourth, one of the most important limitations was the self-reported measures of the dependent as well as the independent variables thereby subjecting the responses to social desirability. According to Nardi (2006), social desirability may be experienced when subjects respond to survey questions in the way they believe that the researcher

wants them to respond. For example, answers may be given inaccurately because respondents either may not know the causes for their own behavior, their memories may be vague, they may not be good at predicting their future behavior, or they may not tell what they know due to social desirability bias (O'Sullivan et al., 2003). In my study, however, by administering the electronic survey that was provided with clear instructions, debriefing, and confidentiality, these obstacles were reduced to certain level.

Fifth, the respondents completed the questionnaire during a part of the year that was overwhelming (e.g., a heavy season or appointment season). Thus, the timing in which the respondents completed the survey might have possibly influenced their organizational commitment.

Sixth, multicollinearity (a condition in which independent variables are very highly correlated) may have occurred and thus affected the results of regression analysis. More specifically, high correlation causes problems when the researcher is attempting to draw inferences regarding the relative contribution of each independent variable to the model's success (Garson, 1998). For example, a high correlation was noted between MPS and autonomy and between overall job satisfaction and intrinsic and extrinsic job satisfaction. In this case, these variables would have had more independence between them than they actually would have had. To avoid this limitation, the general job satisfaction and motivation potential score were therefore dropped from the regression analyses.

Seventh, the bootstrapping method used for testing the mediating effect was not without limitation.

> Of minor concern is that bootstrapped intervals require more computing time to obtain than normal-theory results, particularly in large samples, but with an ever-increasing processor speed this limitation is not considered serious. Of more concern, bootstrapping cannot easily be used to establish regions of significance for conditional indirect effects (Preacher et al., p. 20).

To avoid this limitation, a normal-theory approach as well as the bootstrapping method was used to obtain regions of significance (Preacher et al., 2007).

Finally, the development process for organizational commitment is more complex and takes more time than relevant variables (e.g., job satisfaction). In addition, meta-analytic reviews listed more than 25 antecedents and several correlates and moderators to organizational commitment (Mathieu & Zajac, 1990). Only a limited number of variables were examined that had been observed to be more relevant to the purpose of my study.

Conclusions

The primary purpose of my study was to investigate the relationship between three components of organizational commitment and the predictor variables job satisfaction, job characteristics, role characteristics, and selected demographic variables. In addition, a comparison was made between police officers and first and mid-level supervisors in order to test whether there was a difference in their affective, continuance, and normative organizational commitment levels. The final purpose was to examine the moderating role of GNS and the mediating role of overall job satisfaction between five job characteristics and three components of organizational commitment.

Results revealed that role conflict and role ambiguity were negatively related to affective commitment. A positive significant relationship existed between affective commitment and tenure, task significance, autonomy, and intrinsic and extrinsic job satisfaction with intrinsic and extrinsic job satisfaction being the greatest contributors to the variance explained in affective commitment. However, no significant relationship existed between affective commitment and marital status, education, number of children, skill variety, task identity, job feedback, and role overload.

After controlling for age and working unit, the relationship between continuance commitment and education, autonomy, and role conflict were significant. While the relationship between education and continuance commitment and autonomy was in a negative direction, role conflict was found to be positively related to continuance commitment among TNP members. Therefore, education was found to be the greatest contributor to the variance explained in continuance commitment.

When normative commitment was added as a dependent variable to the model, number of children, task significance, role ambiguity, and intrinsic job satisfaction and extrinsic job satisfaction made significant contributions. In other words, while the number of children, task significance, and intrinsic and extrinsic satisfaction were positively related, role ambiguity was negatively related to normative commitment. Intrinsic satisfaction was found to be the most influential variable in predicting normative commitment.

Results also revealed that there was a significant difference in the level of affective, continuance, and normative commitment between police officers and mid-level

supervisors and between first level supervisors and police officers. However, there was no difference of commitment levels found between females and males.

Finally, the statistical analysis obtained by conducting moderation and mediation analysis revealed that overall job satisfaction mediated the relationship between the five job characteristics (skill variety, task identity, task significance, autonomy, and job feedback) and affective and normative commitment. Also, GNS was found to be a moderator between task identity and affective commitment, skill variety and continuance commitment, and autonomy and job feedback and normative commitment.

Essentially, my study has contributed to the growing literature of organizational commitment and the influence that job satisfaction, job characteristics, and role characteristics have on its development, particularly in policing among TNP members. The findings have provided evidence to the notion that Meyer and Allen's 3-component model of organizational commitment can be extended to an international setting and have also provided useful and practical information for organizations, researchers, behavioral scientists, and management practitioners. Finally, guidelines have been provided to help TNP's police managers better understand how to increase the affective, continuance, and normative commitment among police officers and police supervisors.

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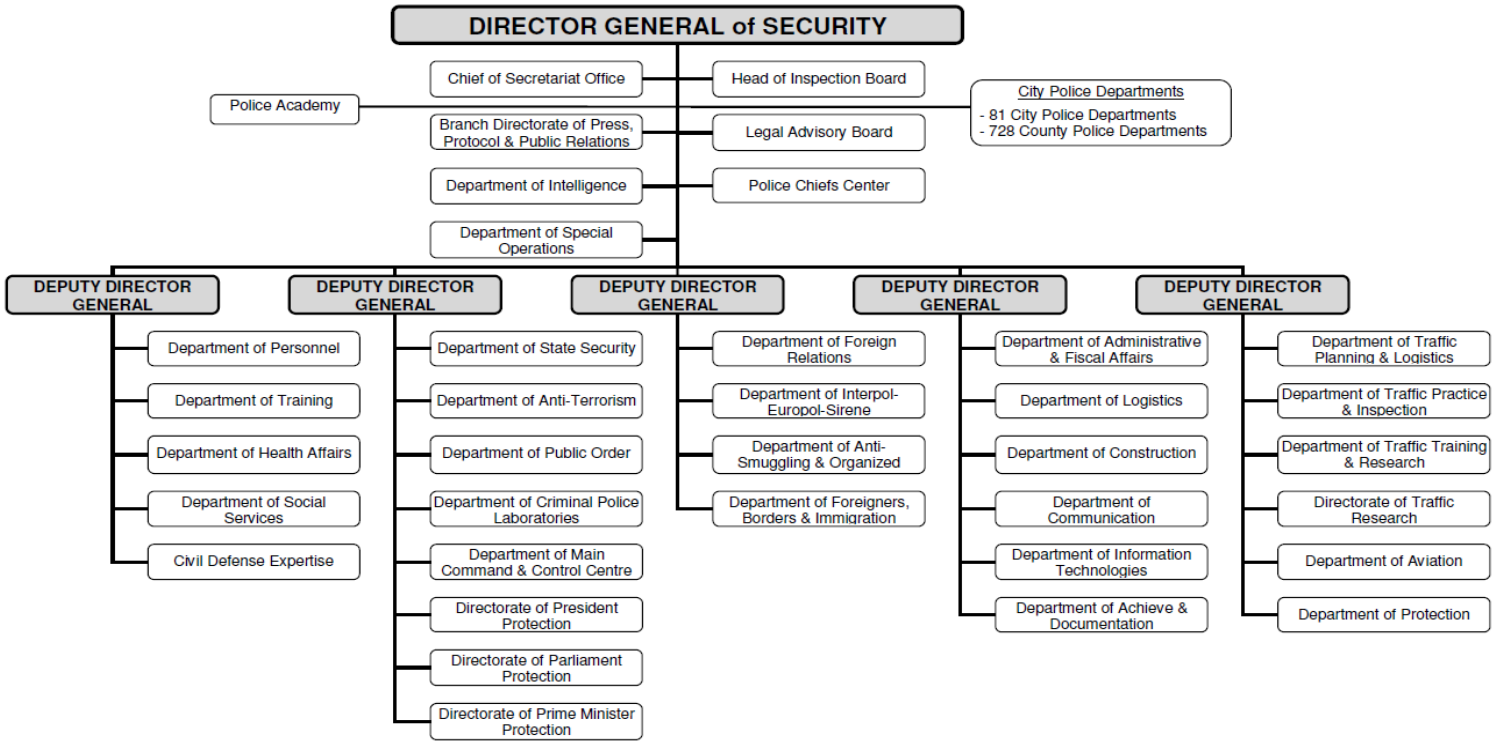
APPENDICES

APPENDIX A

Organizational Chart of Turkish National Police
(Adapted from www.egm.gov.tr)



APPENDIX B

Ranks, Titles, and Tasks of the Turkish National Police

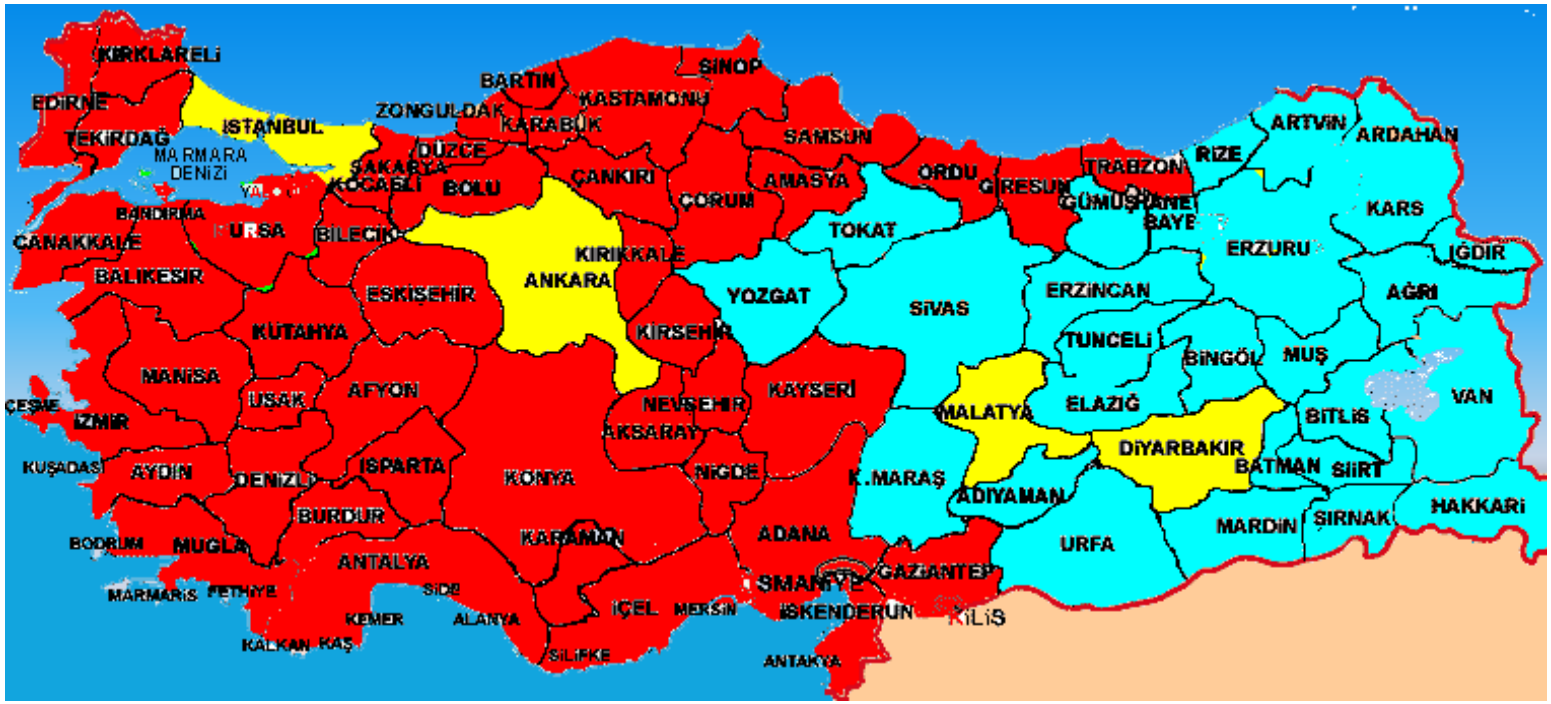
(adapted from Sever, 2005)

Ranks	Titles	Tasks
	The Chief of General Directorate of Security	He is the Chief of the Central Police at the headquarters located in the capital.
	Chief Superintendent First Class	The Police Chief of the large cities and head of regions and divisions. Internal Affair investigators, legal counselors.
	Chief Superintendent Second Class	Assistant Chief of Police in large cities and head of the few small towns or divisions.
	Chief Superintendent Third Class	Directors of small cities and Police Chief of mid-size cities.
	Chief Superintendent Fourth class	Assistant Chief of mid-size cities and police chief of small towns.
	Superintendent	Assistant Police Chief in small town police department bureaus and Chiefs of Bureau in big Divisions; Acting Chief Police in a big division of department
	Captain	Regional Commanders and Assistant of Central police in large cities.
	Lieutenant	First Line Commanders in Police Stations; Second line commanders and supervisors in Departments
	Sergeant	Group leaders in police stations; the Squad Commanders in metropolitan stations
	Police Officer Constable	Police officers graduate from Police Training Schools. They are backbone of the force

APPENDIX C

Map of Turkey

(Cities Selected for Electronic Survey)



APPENDIX D

3-Component Model of Organizational Commitment Scales
Meyer and Allen (1997)

For the next set of questions, please check the answer that shows how much you AGREE or DISAGREEE with each of the following statements.

1= Strongly disagree 2=Disagree 3= Somewhat disagree, 4=Neither agree nor disagree, 5=Somewhat agree, 6=Agree, 7=Strongly agree

1. I would be very happy to spend the rest of my career in this organization.
   1 2 3 4 5 6 7

2. I really feel as if this organization's problems are my own.
   1 2 3 4 5 6 7

3. I do not feel like "part of the family" at my organization. (R)
   1 2 3 4 5 6 7

4. I do not feel "emotionally attached" to this organization. (R)
   1 2 3 4 5 6 7

5. This organization has a great deal of personal meaning for me.
   1 2 3 4 5 6 7

6. I do not feel a strong sense of belonging to my organization. (R)
   1 2 3 4 5 6 7

7. It would be very hard for me to leave my organization right now, even if I wanted to.
   1 2 3 4 5 6 7

8. Too much of my life would be disrupted If I decided I wanted to leave my organization right now.

   1 2 3 4 5 6 7

9. Right now, staying with my organization is a matter of necessity as much as desire.

   1 2 3 4 5 6 7

10. I believe that I have too few options to consider leaving this organization
    1 2 3 4 5 6 7

11. One of the few negative consequences of leaving this organization would be the scarcity of available alternatives.

    1 2 3 4 5 6 7

12. One of the major reasons I continue to work for this organization is that leaving would require considerable personal sacrifice; another organization may not match the overall benefits I have here.

    1 2 3 4 5 6 7

13. If I had not already put so much of myself into this organization, I might consider working elsewhere.

    1 2 3 4 5 6 7

14. I do not feel any obligation to remain with my current employer. (R)
    1 2 3 4 5 6 7

15. Even if it were to my advantage I do not feel it would be right to leave my organization now.

    1 2 3 4 5 6 7

16. I would feel guilty if I left my organization now.
    1 2 3 4 5 6 7

17. This organization deserves my loyalty.
    1 2 3 4 5 6 7

18. I would not leave my organization right now because I have a sense of obligation to the people in it.

    1 2 3 4 5 6 7

19. I owe a great deal to my organization.
    1 2 3 4 5 6 7

Permission from Dr. John P. Meyer

From: John Meyer <meyer@uwo.ca>
To: Sedat Polat/O/VCU <polats@vcu.edu>

Date: Wednesday, May 20, 2009 08:31AM
Subject: Re: Permission to Use Commitment Scales
History: This message has been replied to.

Dear Sedat,
You can obtain a license to use the commitment scales for academic research purposes by going to the following website: www.employeecommitmentresearch.com . Your timing is quite good because the administrative fee is temporarily being waived so you can obtain a license for free. I hope all goes well with your research.
Best regards,
John Meyer

----- Original Message -----
From: Sedat Polat/O/VCU
To: meyer@uwo.ca
Sent: Tuesday, May 19, 2009 6:00 PM
Subject: Permission to Use Commitment Scales

Date: Wednesday, May 20, 2009 09:12AM
Subject: Flintbox - License Agreement for Student License for Use of the Survey in a Single Student Research Project (Academic Users Guide - Dec 2004.pdf)

flintbox® where IP connects

Licensee: Sedat Polat
Virginia Commonwealth University
, Virginia
USA

Project: TCM Employee Commitment Survey - Academic Package - Student License for Use of the Survey in a Single Student Research Project (Academic Users Guide - Dec 2004.pdf)
Date: 20 May 2009 6:18 PST

TCM EMPLOYEE COMMITMENT SURVEY LICENSE AGREEMENT - FOR STUDENT USE

TCM EMPLOYEE COMMITMENT SURVEY LICENSE AGREEMENT - FOR STUDENT USE

As posted on November 10, 2008

IMPORTANT - PLEASE READ CAREFULLY: This License Agreement is a legally binding agreeme between you and your employer, educational institution or organization (collectively "YOU") a The University of Western Ontario ("WESTERN") for the "TCM Employee Commitment Survey' and all associated documentation (together, the "Product") developed by Dr. John Meyer and Natalie Allen in the Faculty of Social Science at WESTERN. Your use of the Product is subject t the terms and conditions set forth below. Please carefully read the terms and conditions of thi license agreement.

THIS LICENSE IS LIMITED TO A SINGLE USE OF THE PRODUCT IN A RESEARCH PROJECT. ADDITIONAL USES OF THE PRODUCT REQUIRE A RENEWAL LICENSE.

IF YOU AGREE TO BE BOUND BY THE TERMS OF THIS AGREEMENT, YOU SHOULD CLICK ON THE " I Accept" BOX AT THE BOTTOM OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, YOU ARE NOT AUTHORIZED TO ACCESS OR USE THE PRODUCT

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APPENDIX E

Minnesota Satisfaction Short Form Questionnaire (Msq)
Weiss, Dawis, England, and Lofquist, (1977)

Ask yourself: How satisfied am I with this aspect of my job?

1 = Very Dissatisfied
2 = Dissatisfied
3 = Neutral
4 = Satisfied
5 = Very Satisfied

20. Being able to keep busy all the time	1	2	3	4	5
21. The chance to work alone on the job	1	2	3	4	5
22. The chance to do different things from time to time	1	2	3	4	5
23. The chance to be “somebody” in the community	1	2	3	4	5
24. The way my boss handles his/her workers	1	2	3	4	5
25. The competence of my supervisor in making decisions	1	2	3	4	5
26. Being able to do things that don’t go against my conscience	1	2	3	4	5
27. The way my job provides for steady employment	1	2	3	4	5
28. The chance to do things for other people	1	2	3	4	5
29. The chance to tell people what to do	1	2	3	4	5
30. The chance to do something that makes use of my abilities	1	2	3	4	5
31. The way company policies are put into practice	1	2	3	4	5
32. My pay and the amount of work I do.	1	2	3	4	5
33. The chances for advancement on this job.	1	2	3	4	5
34. The freedom to use my own judgment	1	2	3	4	5
35. The chance to try my own methods of doing the job	1	2	3	4	5
36. The working conditions	1	2	3	4	5
37. The way my co-workers get along with each other	1	2	3	4	5
38. The praise I get for doing a good job	1	2	3	4	5
39. The feeling of accomplishment I get from the job.	1	2	3	4	5

Permission for Short Form of MSQ

UNIVERSITY OF MINNESOTA

Twin Cities Campus

Department of Psychology
College of Liberal Arts

N218 Elliott Hall
75 East River Road
Minneapolis, MN 55455

Office: 612-625-2818
Fax: 612-626-2079
www.psych.umn.edu

May 29, 2009

Sedat Polat
8717 Aldeburgh Drive
Richmond, VA 23294

Dear Sedat Polat:

We are pleased to grant you permission to translate the Minnesota Satisfaction Questionnaire short form into Turkish.

Please note that each copy that you make must include the following copyright statement:

Copyright 1977, Vocational Psychology Research
University of Minnesota. Reproduced by permission.

Our policy has been to grant permission for translation of the instrument only if Vocational Psychology Research, the current holder of the copyright, retains commercial rights, that is, you would be able to use the instrument for the research project you described without payment of royalties, but the translation would be turned over to us upon completion of the research. We also ask that two copies be sent to us as soon as the translation has been completed. Finally, we must have assurance that the American Psychological Association Guidelines are being followed.

Please do not hesitate to contact us if you have any questions or if we can be of any further assistance. We look forward to hearing from you. Please feel free to call us at 612-625-1367.

Sincerely,

Dr. David J. Weiss, Director
Vocational Psychology Research

APPENDIX F

Job Diagnostic Survey (JDS)
Hackman and Oldham (1980)

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your description as accurate and as objective as you possibly can.
You are to choose the number which is the most accurate description of your job.

40. How much *autonomy* is there in your job? That is, to what extent does your job permit to you to decided *on your own* how to go about doing the work?

1	2	3	4	5	6	7
Very little; the job gives me almost no personal 'say" about how and when the work is done			Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.		Very much; the job gives me complete responsibility for deciding how and when the work is done	

41. To what extent does your job involve doing a *"whole" and identifiable piece of work*? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small *part* of the overall piece of work, which is finished by other people or by automatic machines?

1	2	3	4	5	6	7
My job is only a tiny part of the result of my activities cannot be seen in the final product or service			My job is moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome about the work.		My job Involves doing the whole piece of work, from start to finish; the result of my activities are easily seen in the final product or service	

42. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1	2	3	4	5	6	7
Very little; the job requires me to do the same routine things over and over again			Moderate variety		Very much; the job requires me to do many different things, using a number of different skills and talents	

43. In general, how *significant* or *important* is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people.

1	2	3	4	5	6	7
Not very significant; the outcomes of my work are *not* likely to have important effects on other people			Moderate significant		Highly significant; the outcomes of my work can affect other people in very important ways.	

44. To what extent does doing *the job itself* provide you with information about your work performance? That is, does the actual work *itself* provide clues about how well you are doing-aside from any "feedback" co-workers or supervisors may provide?

1	2	3	4	5	6	7
Very Little; the job itself is set up so I could work for-ever without finding out how well I am doing			Moderately; sometimes doing the job provides "feedback" to me; some-times it does not			Very much; the job is set up so that I get almost constant feedback as I work about how well I am doing

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an *accurate* or an *inaccurate* description of your job. Once again, please try to be as objective as you can in deciding how much accurately each statement describes your job regardless of whether you like or dislike your job.

How accurate is the statement in describing your job?

45. The job requires me to use a number of complex or high-level skills.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

46. The job is arranged so that I do *not* have the chance to do an entire piece of work from beginning to end.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

47. Just doing the work required by the job provides many chances for me to figure out how well I am doing?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

48. The job is quite simple and repetitive.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

49. The job is one where a lot of other people can be affected by how well the work gets done.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

50. The job denies me any chance to use my personal initiative or discretion in carrying out the work.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

51. The job provides me the chance to finish completely any work I start.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

52. The job itself provides very few clues about whether or not I am performing well.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

53. The job gives me considerable opportunity for independence and freedom in how I do the work.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

54. The job itself is *not* very significant or important in the broader scheme of things.

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

SECTION SIX

Listed below are a number of characteristics which would be present on any job. People differ about how much they would like to have each one present in their own jobs. I am interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristics present in your job.

NOTE: The numbers on this scale are different from those used in previous scales.

55. Stimulating and challenging work.

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

56. Changes to exercise independent thought and action in my job.

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

57. Opportunities to learn new things from my work

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

58. Opportunities to be creative and imaginative in my work

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

59. Opportunities for personal growth and development in my job.

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

60. A sense of worthwhile accomplishment in my work

4	5	6	7	8	9	10
Would like having this only a much moderate amount (or less)			Would like having this very much			Would like having this extremely

General Permission for Research Purpose

APPENDIX A
THE JOB DIAGNOSTIC SURVEY

This appendix reproduces the Job Diagnostic Survey (JDS), an instrument designed to measure the key elements of the job characteristics theory. The survey measures several job characteristics, employees' experienced psychological states, employees' satisfaction with their jobs and work context, and the growth need strength of respondents. For a complete description of the job characteristics theory and the variables measured by the JDS, see Chapter 4 of this volume.

The JDS was designed to be completed by the incumbents of the job or jobs in question—not by individuals outside the job. An instrument designed for the latter purpose is entitled the Job Rating Form (JRF) and is reproduced in Appendix B. Instructions for scoring the JDS and JRF may be found in Appendix C. JDS norms for several job families are provided in Appendix E and may be used for comparison purposes with JDS data collected from many jobs.

The JDS is not copyrighted and therefore may be used without the authors' permission. However, prior to using the JDS, one should carefully read the users' guide for administering and interpreting the instrument (see Appendix D).

A short form of the JDS has also been developed. It excludes measures of the experienced psychological states and uses fewer items to measure other key variables in the job characteristics theory. The JDS short form and its scoring key may be found in Hackman and Oldham (1974).

APPENDIX G

Role Conflict and Role Ambiguity
Rizzo, House, and Lirtzman (1970)

Please indicate how true or false each condition applies to you by circling the appropriate number, ranging “1” (Very False) to “7” (Very True).

61. I have to do things that should be done differently

1	2	3	4	5	6	7
Very False						Very True

62. I work on unnecessary things.

1	2	3	4	5	6	7
Very False						Very True

63. I receive an assignment without the proper manpower to complete it.

1	2	3	4	5	6	7
Very False						Very True

64. I receive an assignment without adequate resources and materials to execute it.

1	2	3	4	5	6	7
Very False						Very True

65. I work with two or more groups who operate quite differently.

1	2	3	4	5	6	7
Very False						Very True

66. I have to ignore a rule or policy in order to carry out an assignment.

1	2	3	4	5	6	7
Very False						Very True

67. I receive incompatible requests from two or more people.

1	2	3	4	5	6	7
Very False						Very True

68. I do things that are apt to be accepted by one person and not accepted by others.

1	2	3	4	5	6	7
Very False						Very True

69. I know exactly what is expected of me.

1	2	3	4	5	6	7
Very False						Very True

70. I feel certain about how much authority I have.

1	2	3	4	5	6	7
Very False						Very True

71. Clear, planned goals and objectives exist for my job.

1	2	3	4	5	6	7
Very False						Very True

72. I know that I have divided my time properly.

1	2	3	4	5	6	7
Very False						Very True

73. I know what my responsibilities are.

1	2	3	4	5	6	7
Very False						Very True

74. Explanation is clear of what has to be done.

1	2	3	4	5	6	7
Very False						Very True

APPENDIX H

Quantitative Workload Inventory (Qwi)
(Spector and Jex (1998)

1 = Less than once per month or never

2 = Once or twice per month

3 = Once or twice per week

4 = Once or twice per day

5 = Several times per day

75. How often does your job require you to work very fast?	1	2	3	4	5
76. How often does your job require you to work very hard?	1	2	3	4	5
77. How often does your job leave you with little time to get things done?	1	2	3	4	5
78. How often is there a great deal to be done?	1	2	3	4	5
79. How often do you have to do more work than you can do well?	1	2	3	4	5

Authorization from Dr. Paul E. Spector

From: "Paul Spector (PSY)" <spector@shell.cas.usf.edu>
To: Sedat Polat/O/VCU <polats@vcu.edu>

Date: Tuesday, May 26, 2009 03:22PM
Subject: Re: permission for
History: This message has been replied to.

Dear Sedat:

You have my permission to use the QWI in your research. You can find details on my website. You do not need to get Jex's permission.

Best,

Paul E. Spector
Department of Psychology
University of South Florida
Tampa, FL 33620
(813) 974-0357 Voice
(813) 974-4617 Fax
spector@shell.cas.usf.edu
website http://shell.cas.usf.edu/~spector

On Mon, 25 May 2009, Sedat Polat/O/VCU wrote:

>
> Dr. Spector,
>
>
> I am in the research phase of my doctoral program in public policy and
> administration at Virginia Commonwealth University . My dissertation is
> on antecedents of three-component of organizational commitment in Turkish
> National Police. I would like permission to use the Quantitative Workload
> Inventory, QWI. The instrument will be administered to police officers,
> first level and mid-level police supervisors employed in Turkish National
> Police with an electronic (web-based) survey method . The Turkish version
> will be utilized in this study and . It will be used research purposes
> only. Your permission vital is crucial to completation of my study.
> Please advice of any requirements or other recommaditions you may have
> regarding the administration of this instrument.
>
>
>
> Thank you in advance for your assistance in this matter,
>
> Regards,
>
>
>
> Sedat Polat
>
> PhD Student VCU
>
> P.S. Also I have not found email address of Dr. Jex, Do I neeed to email

APPENDIX I

Personal Characteristics

Thank you for indicating your responses to all the above statements. Now, please complete the following information about youself. Please be assured that your individual answers will not be revealed. All data in this study will be obtained anonymously.

80. What is your gender?
    1- Female
    2- Male

81. What is your marital status?
    1- Married
    2- Unmarried

82. How many children do you have? _____

83. How long have you been with TNP? _____years _____months

84. What is your education level?
    1- Secondary school
    2- High school
    3- Associate's degree
    4- Bachelor's degree
    5- Master's or doctorate degree

85. What is your age? _____

86. What is your management level?
    1- Police officer
    2- First level supervisor (i.e., sergeant, lieutenant, and captain)
    3- Mid-level supervisor (i.e., superintendent, 3rd class or 4th class superintendent).

87. In which police unit do you work?
    1- Judicial and preventive units
    2- Traffic units
    3- Crime investigation
    4- Human resources units
    5- Logistics units
    6- International affairs units
    7- Internal investigation and consultation units

APPENDIX J

Cover Letter for Electronic Survey

Cover Letter for Electronic Survey

Dear colleague,

The purpose of this electronic letter is to request your participation in a research study. My name is Sedat Polat and I am a graduate student at Virginia Commonwealth University, as well as a Turkish National Police (TNP) member. This research study is an effort to learn about Turkish National Police (TNP) officers` and supervisors` job satisfaction and commitment. Approximately 1,429 police officers and first- and mid-level supervisors in the TNP are expected to be enrolled in this study.

On the following link, you will find an electronic survey designed to obtain data for the purpose of this study. The survey consists of six sections, which have several different kinds of questions about your job and some background information about yourself. Specific instructions are given at the beginning of each section of the survey. Your participation in this study is voluntary. You do not have to answer any question you do not want to answer and you may end your participation and the survey at any time without penalty. Let me assure you that the survey is completely anonymous and confidential. Returning the survey will be interpreted as your consent to participate. Your responses will be stored with those of other colleagues and only information about other TNP members as a group will be studied and reported. Therefore, it is not necessary for you to include your name on the survey.

There are no right and wrong answers to the questions or statement in this survey. Remember, the value of this project depends on how honest you are in responding to the statements or questions. Both positive and negative reactions are of value. The important thing is what you feel to be the most accurate response for you personally. Please complete all of the questions.

There are 87 survey items, and you are requested to select only one option that best describe your opinion. This survey will require approximately 15 minutes to complete. If you choose to participate, I request you complete the survey no later than ../../2009.

If you have any questions or comments about this study or survey questions, please call me on 804-8190787 or send me an email at polats@vcu.edu.

Thank you very much for helping with this important study.

Please click the link below to complete the survey.

Sincerely,

Sedat Polat
Doctorate Student
Virginia Commonwealth University

APPROVED
7/1/09/HT /MBR

APPENDIX K

Research Subject Information and Consent Form

RESEARCH SUBJECT INFORMATION AND CONSENT FORM

TITLE: An Empirical Study of Three-Component Model of Organizational Commitment and Antecedents of Police Officers, First Level and Mid-Level Supervisors in the Turkish National Police

VCU IRB NO.: HM12326

This consent form may contain words that you do not understand. Please ask the study staff to explain any words that you do not clearly understand.

Purpose of the Study:

This research study is an effort to learn about Turkish National Police (TNP) officers` and supervisors` job satisfaction and commitment. Approximately 1,429 police officers and first- and mid-level supervisors in the TNP are expected to be enrolled in this study

Description of the Study:

In this study you will be asked to complete an email survey requesting information about your perception within the organization with respect to Organizational Commitment, Job Satisfaction, job characteristics, role characteristics, and personal characteristic. There are 87 survey items, and you are requested to select only one option that best describe your opinion. The completion of the survey will take approximately 15 minutes.

Risks and Discomforts:

Sometimes revealing opinions about certain issues may cause discomfort. You do not have to answer any question you do not want to answer and you may end the participation and the survey at any time without penalty. If you become upset, the study staff will give you names of counselors to contact so you can get help in dealing with these issues.

Benefits to you and others:

This study is not expected to be of any direct benefit to you. However, this study is the first one in Turkish National Police about the police officers and police supervisors and the information you provide will contribute to police commitment literature.

This study is expected to be a significant tool for policy makers and also for researchers who want to study similar topics in police organizations especially in Turkish national police in the future.

The findings of this study will also have particular significance to other police organizations operating within this type of environment and culture.

Costs:

There are no costs for participating in this study other than the time you will spend filling out the questionnaire. I understand that time is valuable and appreciate your consideration.

Alternatives:

Your alternative is not to participate in this research .

APPROVED

7/1/09 / HT / MBR

Confidentiality:

All of your responses will be kept confidential and your response will be used only for study purposes. None of the 87 survey items are designed in a way to collect respondents' identifiable personal records such as name or badge number. No names will be used, and all of the information will be analyzed and reported as group data. Moreover, no one in your organization will ever know how (or even whether) you respond the survey. All data will be stored in a password-protected personal laptop that only student researcher will have access. Results from the email survey will be used to complete my dissertation as partial fulfillment for the requirements of the Ph.D. in Virginia Commonwealth University.

We will not tell anyone the answers you give us; however, information from the study may be looked at or copied for research or legal purposes by Virginia Commonwealth University. What we find from this study may be presented at meetings or published in papers. The information obtained may be also be shared or copied by authorized agents of Turkish governmental agencies.

Voluntary Participation and Withdrawal:

You do not have to participate in this study. Participation in this study is completely voluntary. You have right to skip any question that you do not want to answer. If you choose to participate, I request you complete the survey no later than ../.. /2009.

Questions:

In the future, you may have questions about your participation in this study. If you have any questions, complaints, or concerns about the research, contact:

Robyn, L. Diehl
Assistant Professor
Virginia Commonwealth University
L. Douglas Wilder School of Government and Public Affairs
Criminal Justice Program
923 West Franklin Street
P.O. Box 842028
Richmond, Virginia 23284-2017
Scherer Hall, Room 107
(804) 828-2759
rldiehl@vcu.edu

If you have any questions about your rights as a participant in this study, you may contact:

Office of Research
Virginia Commonwealth University
800 East Leigh Street, Suite 113
P.O. Box 980568
Richmond, VA 23298
Phone: 804-827-2157

APPROVED

7/1/09 / HT / MBR

You may also contact this number for general questions, concerns or complaints abc research. Please call this number if you cannot reach the research team or wish to ta someone else. Additional information about participation in research studies can be http://www.research.vcu.edu/irb/volunteers.htm.

CONSENT

By online submission of the survey questionnaire you are confirming that you have understood the above information, and you willingly consent to participate in this st other words, by clicking the website link you are confirming that you understand the of the study and you are giving your informed consent to participate in this study.

APPROVED

7/1/09 / HT / IM 13e

VITA

Sedat Polat was born in Sivas, Turkey, in 1973 and graduated from the Police College, Istanbul, Turkey, in 1991. He received his bachelor's degree in criminal justice from the Turkish Police Academy in 1995. He began his career in the Turkish National Police (TNP) with the rank of sergeant and was appointed to the Anti-smuggling Division in Ankara as a team leader of the Narcotics Office where he was employed for more than one year.

He was appointed to the Department of Human Resource Management in 1996, where he worked in the deployment office. In 2001, he was sent to Kosovo by the Turkish Government for the United Nations Mission where he served as a team leader for a year in Prizren. He attended several TNP executive in-service courses regarding management, leadership, and computer technologies between 1995 and 2003 in Ankara. In addition, he was enrolled in courses that included advanced crime scene techniques, emergency management and liability considerations for special events security, and bloodstain pattern analysis in 2003 during a short-term training in the United States at the University of North Texas. He worked with The Perry Township Police Department of Stark County, Ohio, between January 5 and 25, 2003, as part of his internship program.

In August 2004, he was supported by the TNP to pursue graduate studies in the USA where he received a Master of Science in Public Administration from Virginia Commonwealth University in 2006. In 2010, he fulfilled the requirements for the Doctorate of Philosophy degree at Virginia Commonwealth University.