ORGANIZATIONAL JUSTICE PERCEPTION AND ITS EFFECTS ON KNOWLEDGE SHARING: A CASE STUDY OF FORENSICS IN THE TURKISH NATIONAL POLICE

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In today's economy, organizational knowledge is a fundamental factor for remaining competitive and managing intellectual capital. Knowledge Management aims to improve organizational performance by designing the work environment with necessary tools. Yet, significant amount of knowledge resides within the people in different forms such as experience or abilities. Transferring individual knowledge within members or into organizational repositories is so difficult. Knowledge sharing only occurs under certain circumstances: People share knowledge when they believe it is beneficial for them, when they feel safe and secure, and when they trust. Since knowledge is power, and brings respect to its bearer, knowledge sharing needs suitable environment.

In this context, this study investigates intention to knowledge sharing among forensics in the Turkish National Police (TNP) and the factors -such as perceived organizational justice, organizational citizenship behaviors, subjective norms, and attitudes toward knowledge sharing- affecting their intentions. The researcher utilized a model developed from Ajzen and Fishbein's (1975; 1980) theory of reasoned action (TRA). To test this model, a self-administered questionnaire survey was administered in Turkey In order to analyze the quantitative data; SPSS version 19 was used for all preliminary analyses and LISREL 8.8 was used for Regression Analysis and Path Analysis The fit of the data to this proposed model was not adequate. However, 7 of the 8 hypotheses supported.

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CHAPTER 1

INTRODUCTION

Overview

In today's increasingly competitive world economy, knowledge is considered a keyfactor in gaining competitive advantage and managing intellectual capital for both public and private organizations. An organization's value and wealth is measured through the knowledge accumulated overtime and the ability of the organization to transform the knowledge into products and services (Grant, 1991; Teece, 2000; Bock et al., 2005). However, most of that knowledge resides within the people in the forms of skill and competencies. (Nonaka and Konno, 1998). The transformation of individual knowledge into organizational knowledge requires heavy investment in people and human capital. It also obliges an investment in the processes and practices that enable organizations to manage their intellectual capital better. Well-organized knowledge management systems might help organizations to capture and manage high volume of explicit knowledge (information) in the form of documentations into organizational repositories. However, knowledge management systems do not deal with the social aspect of knowledge management, which involves knowledge exchanges and knowledge sharing between people. Knowledge exchange among employees within the organizational level is impacted by the employee's knowledge sharing attitudes and the perceived organizational justice (Bock et al., 2005).

Several studies in knowledge management focused on law enforcement agencies including the Turkish National Police (TNP). Many of these studies concentrated on knowledge management practices, knowledge sharing, leadership, and job satisfaction. Very few studies dealt with the relationship between knowledge sharing and organizational justice.

This research took into account the findings of earlier studies in these areas and focus on the relationship between knowledge sharing and organizational justice within the Turkish National Police (TNP) with the objective of understanding organizational facts and individual distinctions affecting the forensics knowledge sharing intentions. Creating a strong structure for future studies may increase the notability of the study. This study may show variations in communication and reward methods that increase perceptions of organizational justice. In addition, this study is the first to investigate organizational justice and knowledge sharing among forensics in a law enforcement agency.

Introduction of Conceptual Terms

Information has a broad definition. Anything making a contribution to knowledge is considered information. In daily activities, individuals inform each other through various communication methods, which generate information. Wilson (2006) argues that the confusion about the definition of information is caused by the inappropriate and multiple uses of the term information. Information is defined as "facts or details that tell you something about a situation, person, event etc." (Merriam Webster, 2009).

Knowledge is defined as a successful method that generates new approaches and information (Davenport & Prusak, 1998). Data is transformed to information when it is processed. Likewise, information becomes knowledge when it is authenticated (Alavi & Leidner, 2001). According to Wilson (2002) knowledge is personalized information that is kept in human brains. Therefore, it is more dynamic than information and difficult to capture and share.

Organizational justice is an overarching name to the practice of the fairness in organizational settings. It can appear in different forms such as distributive, procedural (George & Jones, 2007; Ibragimova, 2006), interpersonal, and informational justice (George & Jones,

2007). The underlying principle behind organizational justice is that individuals anticipate being treated fairly and equally (Ibragimova, 2006). According to Greenberg (1990), organizational justice emerges as a part of social psychology that aims to understand fairness issues in social relations.

Knowledge management is defined as the process of gaining, accumulating, distributing, and using knowledge (Bock et al., 2005; Ibragimova, 2006). In another saying, knowledge management is the system of identifying and storing the intellectual assets of an organization for reuse in future. Thus, knowledge management systems are essential for organizations. Poor management wastes resources and time. In addition to formal information sources and knowledge kept in knowledge management systems, individual's explicit and implicit knowledge are also assets for an organization (Ibragimova, 2006).

Knowledge sharing is defined as voluntary actions of spreading or conveying information, skill or expertise from one individual, cluster or body to another (Lee, 2001). Bock et al. (2005) emphasizes that the functioning expression in the definition is to be an activity requiring enthusiasm and willingness. As a practical implementation, knowledge sharing can be encouraged by creating a suitable environment with useful tools, but cannot be obliged since it resides within the carrier unless exposed (Bock et al., 2005).

Organizational citizenship behavior (OCB) is defined as nontraditional individual behavior that promotes achieving organizational goals socially and psychologically within a workplace (Organ, 1988; Moorman, 1991; Srivastava & Saldanha, 2008). Organ (1988) argues that OCB is not easy to capture and promote by formal reward systems since it is not a part of the job description but a discretionary behavior. OCB is not an enforceable requirement for a job, but its presence enhances the work environment positively (Moorman, 1991; Organ, 1988).

Forensic science is defined as the application of various scientific methods to answer questions coming from a legal system concerning a crime (Free Dictionary, 2012). As cited in Inman and Rudin (2000), the book named *Hsi Duan Yu*, which means "washing away of wrongs," was the first known documented application of medical practices explaining corpses' causes of death in 1248, in China. However, it took hundreds of years to see forensic scientists in courtrooms (Buckles, 2007). The first forensic laboratory was opened in Paris in 1910 (Inman & Rudin, 2000). *Forensics*are the scientists who support crime investigations with their evidence-based investigation reports, which depend on accepted scientific methodology and norms (Saferstein, 2006).

Problem Statement

Knowledge management aimed at improving organizational performance by designing the work environment with all the necessary tools to keep operations running efficiently and effectively. Communication and relationship are the major factors that contribute to the creation and sharing of knowledge within the organization. The lack of knowledge sharing causes poor performance at the individual and organizational level. However, knowledge sharing only occurs under certain circumstances: People share knowledge when they believe it is beneficial for them, when they feel safe and secure, and when they trust. Since knowledge is power, and brings respect to its bearer, knowledge sharing requires a suitable environment to emerge.

The Department of Police Forensic Laboratories (DPFL) employs over 600 experts, assistants, and technicians in a variety of forensic branches (Bircan, M., personal communication, 2012).The forensics in the TNP has been examining numerous cases as an important part of the judicial process. According to annual statistics from the DPFL, over

215,000 pieces of evidence were investigated by the forensics in 2011 (Bircan, M., personal communication, 2012).

During these operations, knowledge sharing plays a significant role in enhancing communication and improving operational effectiveness. Previously, there is no research that has investigated knowledge-sharing intentions among forensic experts in the TNP. Thus, it is considered valuable to study the influence of organizational justice perceptions on knowledge sharing. As a result to this study, it will be possible to disclose the problems related to organizational justice practices and knowledge sharing channels exercised by forensic experts in their work environment.

Purpose of the Study

The purpose of this research is to investigate organizational justice perception and its relationship to knowledge sharing among forensic experts in the TNP. The study will provide recommendations that will serve as a foundation for establishing a better policy for creating a more equal and fair work environment that encourages the employees to improve their knowledge sharing practices and communication skills. It is also expected to be a contributing factor for managing intellectual assets and improving performance within TNP.

Drucker (1992) emphasizes that knowledge has become the key factor with the transition from an industrial society to a knowledge society. Along with the new society, organizations perceived that their knowledge sharing practices, which are the fundamental elements of the knowledge management systems, had remarkable effects on their success.

The study takes twofold approach to the problem. It seeks to study and investigate the degree in which organizational justice is perceived in TNP. At the same time the researcher studies the relationship and the correlation between organizational justice and knowledge sharing

practices among forensic experts in TNP. In addition to investigating organizational justice perceptions of the forensics, the research model in the study seeks the influence of demographic factors, and individual differences such as organizational citizenship behaviors to intention to share knowledge. The researcher hopes that findings from this study contribute to the literature, practitioners, and policy makers by focusing on organizational justice determinants and their influence on knowledge sharing practices between the forensic experts.

Significance

While this is not the first knowledge management study in TNP, it is the first of its kind that investigates the relationship between perceived organizational justice and knowledge sharing practices. The study proposes valuable approaches in several areas. Theoretically, this study helps to understand organizational factors (e.g. perceived organizational justice) and individual distinctions (e.g. organizational citizenship and demographic factors) affecting the forensics' knowledge sharing intentions. For practical implications, it is necessary to understand the role of perceived organizational justice in behavioral intentions such as intention to share knowledge. This study will be functional in developing policies in the TNP. The organization, TNP, does not know how to promote knowledge sharing among its members since the latent obstacles are not known. As a byproduct, the TNP can design knowledge preservation plan against knowledge loss.

Creating a strong structure for future studies may increase the notability of the study. Also, this study may recommend communication and reward methods that improve the degree of organizational justice perceptions. In addition, this study will be the first that investigates organizational justice and knowledge sharing among forensics in a law enforcement agency.

Theoretical Foundations

In terms of their evaluating roles, information users have been studied in several areassuch as diffusion of innovation, human-computer interaction, information systems management, and technology design and implementation (Dillon & Morris, 1996). Several theories, models, and assumptions have been proposed to explain information user preferences on systems and technology including Rogers' (1995), Davis' (1989), and Fishbein and Ajzen's (1975) theories. So far, these theories appear to provide the best understanding about information user behavior, satisfaction, understanding, and evaluation of user-centered systems.

In real-world consequences, knowledge sharing can be enabled and encouraged in several ways such as rewarding (economic), acknowledgement (social-psychological), and generating fairness (sociological) at work (Bock et al., 2005). Fairness or justice is a sociological phenomenon that has been observed and studied in every aspect of life for decades. In equity theory, Adams (1965) emphasizes that outcomes, in other words meaning distributions, determine individual differences on work attitudes and behavior. However, the notion of justice is not limited or related to the outcomes only. Research revealed that people are concerned about the decision-making processes as well as the decision itself (Sillito-Walker, 2009). Earlier studies highlighted that organizational justice has been associated with organizational commitment and job satisfaction in a linear direction (Crow et al., 2011). Organizational justice is a part of management to enhance work environment and increase the work satisfaction and productivity. Knowledge sharing practice is a contributing factor to intellectual assets of an organization through its human capital. Thus, organizational justice perception has been assumed to be an antecedent to behavioral intentions such as the intention to share knowledge (Sillito-Walker, 2009).

Even though organizational citizenship behavior (OCB) is considered to stem from a self-motivated behavior; OCB is hard to promote in a formal reward system, and it can be predicted from productivity, retention on the job, and relations within the members of the organization. In addition to outcomes, organizational justice factors are significant forecasters of OCBs (Organ, 1990). Research suggests that perception about fairness at work place increases OCBs since there is a contributory relationship between organizational justice and OCB (Moorman, 1991; Chegini, 2009; Jafari & Bidarian, 2012). Organ (1988) stressed that the level of OCB could be an indicator of inequity in an organization. Since OCB is both discrete and supplementary, it is not measureable and is not included in the job description. Research suggests that we are likely to observe changes in OCB related to the fairness perceptions (Moorman, 1991).

The theoretical foundation of this research is based on Fishbein and Ajzen's (1975; 1980) theory of reasoned action (TRA). According to this theory, behavioral beliefs and evaluation of the consequences determine an individual's attitude (Ajzen & Fishbein, 1980). TRA stresses that actual behavior is represented by behavioral intention, which is a measure of intention required to perform. In other words, behavioral intentions are a summary of motivation to act (Ibragimova, 2006). Fishbein and Ajzen (1975; 1980) argue that an individual's behavioral intention is a predictor of the behavior itself. TRA is constructed on three components; behavioral intention, subjective norm and attitude (Ajzen and Fishbein, 1975; 1980). At a glance, the theory gives an impression of simplicity; however, it is as complex as human behavior (see Figure 1). Emerging from social psychology, the theory has been tested in various areas ranging from consumer traits to health related daily activities (Madden et al., 1992; Hale et al., 1997).

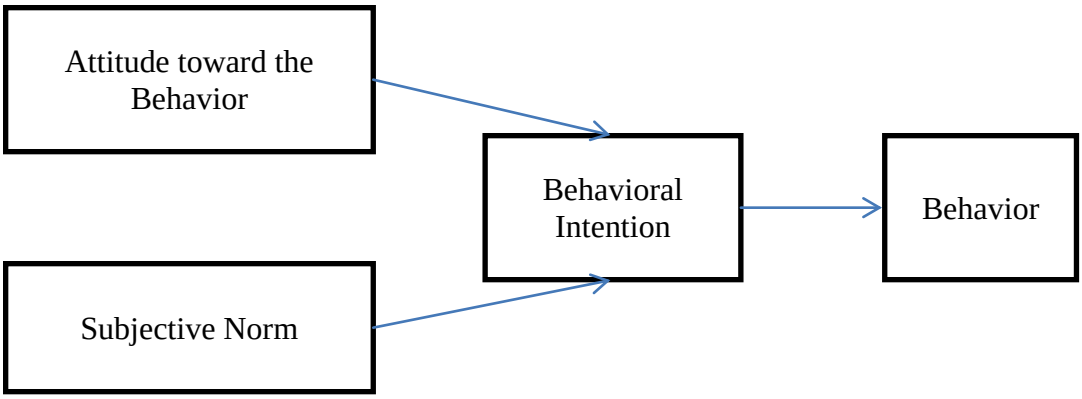

Figure 1.The theory of reasoned action (TRA, Ajzen and Fishbein, 1980).

The principal assumption of the theory originated on the idea that intentions are the best predictors of behavior. Intention represents cognitive readiness to perform a particular behavior (Ajzen, 1991). The TRA specifies the factors and incentives that cause any behavior. The theory predicts that an individual's behavior –in this case knowledge sharing—is determined by intention to share knowledge (Tao, 2008). Actual behavior is triggered by behavior intention, which is supported by attitude toward performing a behavior and by subjective norm. Simply put:

Attitude + Subjective Norm → Behavior Intention → Actual Behavior

It is assumed that individuals control their behavior voluntarily. By this assumption, individuals consider the consequences or implications of their actions before they act. Thus, intention has been strongly associated with behavior. Behavior is a meaning of two components in this equation: attitude, which represents an individual's evaluation of performing behavior and subjective norm, which is the sum of expectations by the people around this individual and the individual's motivation to comply (Ajzen and Fishbein, 1980; Tao, 2008).

Due to limitations on explaining intention with attitude and subjective norm, Ajzen (1991) introduced another determinant factor: perceived behavioral control. Perceived behavior

control refers to people'sconfidence level about their ability to perform a specific behavior. This addition generated a new theory called the theory of planned behavior (TPB) (see Figure 2). Ajzen (1985; 1991) argued that perceived behavioral control influenced behavior as well as attitudes and subjective norms. He emphasized that behavior is not voluntarily controlled all the time. Ajzen (1991) asserts that behavior determines outcomes in general, however, knowing perceived behavioral control along with subjective norms and attitude toward the behavior predicts the likelihood the intention becomes behavior.

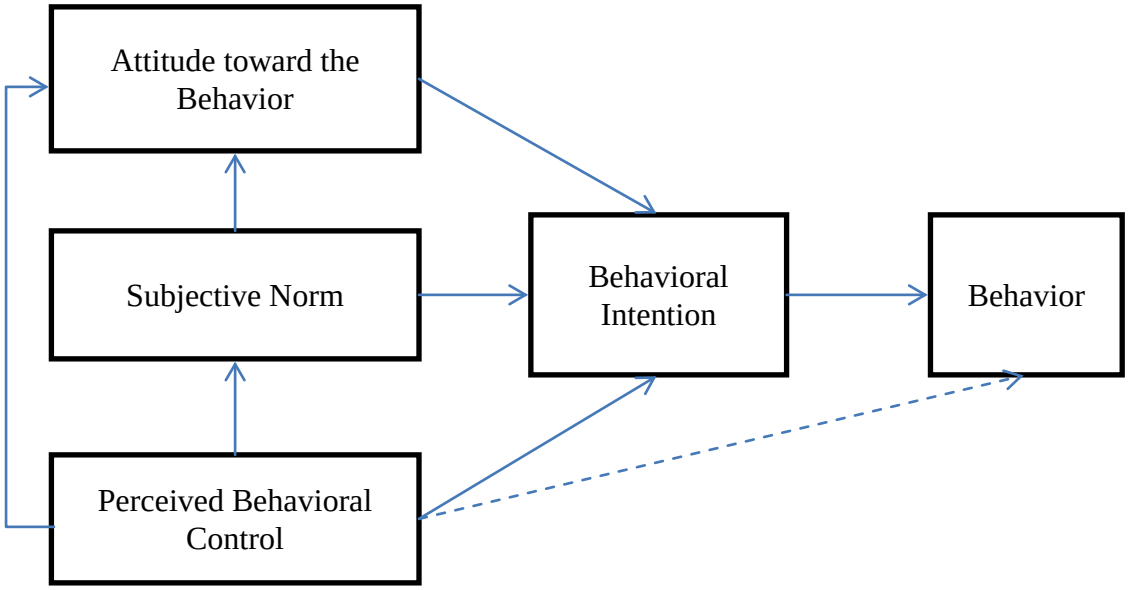

Figure 2. The theory of planned behavior (TPB) (Ajzen, 1991).

Knowledge sharing and management research focused on various topics including organizational justice, OCB, job satisfaction, and organizational culture. However, research investigating the relationship between organizational justice, OCB, and knowledge sharing is limited. Thus, the linear relationship observed in previous research (Moorman, 1991; Bock et al., 2005; Ibragimova, 2006; Crow et al., 2011) is tested in a different sample.

CHAPTER 2

LITERATURE REVIEW

Knowledge Management and Sharing

In addition to their primary functions, organizations operate as knowledge-integrating environments for their members (Kogut & Zanger, 1992). Knowledge that is necessary to fulfill the organization's daily functioning may reside with certain members only. It is an obstacle that restrains the organization in producing new knowledge and enriching its intellectual capital. Yet the formation of new knowledge requires some prerequisites in the work environment such as trust, openness, and encouragement (Brown & Woodland, 1999). The more trustworthy an organization's environment, the more knowledge flows between the members and units of the firm. There is a direct correlation in the amount of knowledge accumulated in organizational depositories and within individuals (Hoecht & Trott, 1999).

Nonaka and Takeuchi (1995) classify knowledge into two main categories: explicit and tacit. While the former can be codified into different contexts for future use, the latter is experience based and cannot be transferred and codified easily (Ibragimova, 2006). In an organizational environment, tacit knowledge is transferred via informal structures such as mentoring and storytelling (Swap et al., 2001). Contrary to this informality, explicit knowledge is kept in formal depositories such as databases, manuals, and standard operating procedure booklets. Thus, codified and accessible knowledge is easy to transfer among users (Kogut & Zanger, 1992).

Collier (2006) groups knowledge management literature into three major clusters: knowledge management, organizational learning, and intellectual capital. Petty and Guthrie (2000) assert that knowledge management is the management of company controlled intellectual

capital, which is distinguished by three dimensions. The first one is human intellectual capital referring to individual level knowledge and skills. The second dimension is organizational intellectual capital, which includes all internal activities, systems, and structures. The last, customer intellectual capital, is customer loyalty, brand reputation etc. (Collier, 2006).

Alavi and Leidner (2001) focus on knowledge from a different perspective. They classify knowledge into four processes according to its life cycle in the firm: knowledge generation, knowledge codification, knowledge transfer, and knowledge application (Alavi & Leidner, 2001; Ibragimova, 2006). Ibragimova (2006) argues that transferring individual knowledge to organizational use is difficult due to a variety of obstacles. First, the dominant organizational culture along with individual expectations and motivations prevent sharing knowledge (Bock et al., 2005). Second, competition within the organization at different levels is another deterrent (Garud & Kumaraswamy, 2005). Third, it is difficult to convert the knowledge into a common and understandable terminology, thus requiring a serious effort (Ibragimova, 2006). Effective communication is possible only if the individuals speak the same language. In addition, they have to be aware of essential symbols to exchange knowledge (Alavi & Leidner, 2001). Lastly, hardships within interpersonal relations influence the knowledge transfer process (Kankanhalli et al., 2005).

Chowdhury and Ahmed (2005) investigate critical success factors affecting knowledge management implementation. Their study emphasized various knowledge management approaches among three international oil & gas companies (e.g. Shell, BP and Chevron) and one oil & gas company in Malaysia. The success factors investigated were grouped under four categories: leadership, organization, organizational learning, and technology. They suggest that enhancing the work environment and fostering the notion of engagement and commitment to the

organization increase accepting knowledge management initiatives among the employees (APQC, 2002; Chowdhury & Ahmed, 2005). Moreover, sustainable knowledge management requires motivations for sharing, revising the best practices, and monitoring the knowledge management activities (Chowdhury & Ahmed, 2005).

Ahmed, Lim and Zairi (1999) proposed a holistic knowledge management model based on four knowledge management steps. The first step is capturing or creating knowledge, which is possible to acquire from external and internal sources. The second step is defined as sharing knowledge through communication tools such as electronic sharing, distributing hard copies, and meetings. The third step is measuring the effects and success of these activities. The last step is learning and improving, which completes the cycle. In order to make it operational, the model needs contributions from these key elements: customers, organization, suppliers and technology. The study stresses that effective knowledge management strategies reduce the loss of intellectual capital due to employee turnover reduce the cost of new products or services, and increase productivity since the knowledge is accessible to all employees. Thus, job satisfaction increases (Ahmed et al., 1999).

Trust, as a concept in management is an indicator of employee commitment to the organizational goals. Renzl (2006) investigated the role of trust to sharing knowledge. In organizational settings, management controls compensation, promotion, and reward systems. Thus, sharing knowledge promoted by reward systems improves individual and group performance (Renzl, 2006). Abrams, Cross, Lesser, and Levin (2003) stressed that trust increases all knowledge activities within the group. In terms of a knowledge perspective, trust is defined as willingness to share knowledge with the other party. Therefore, it is viewed as an enabler to share knowledge (Renzl, 2006). Data for this study was collected from two companies through

self-administered questionnaires. The study proposed a model on mediating role of fear and of documentation in knowledge sharing within team members. The results reveal that trust in management reduces fear of documenting knowledge and losing one's value in the group previously gained from that knowledge; and documenting knowledge is not only a technical issue but also a matter of enthusiasm of individuals.

Obstacles to Knowledge Sharing and Knowledge Management

There are numerous barriers that can obstruct knowledge sharing among members of the organization. The main perception is that knowledge is considered as prestigious property (Dalkir, 2011). Research suggests that organizational productivity and commitment increase if the individuals are reassured that their contributions to organizational knowledge will be credited and acknowledged (Dalkir, 2011). Similarly, employees engage in knowledge sharing activity when their perceived extrinsic motivation (benefits) is higher than the effort (cost) after a cost-benefit analysis (Lin, 2007). Self-satisfaction, or intrinsic motivation, is another behavior when knowledge sharing occurs (Lin, 2007). Dalkir (2011) suggests that organizations must promote knowledge sharing with incentives instead of knowledge hoarding.

Simon and March (1968) asserted that humans' mental processes are limited to their cognition. This is defined as "bounded rationality". Regardless of their intelligence, people are inadequate to clutch all available knowledge. Thus, people do not demonstrate rational moves to overcome problems all the time. Moreover, instead of revisiting the whole process to reach a better result, individuals prefer to find simple solutions to surmount their lack of information (Simon & March, 1968).

Strong, Davenport and Prusak (2008) investigate knowledge and learning concepts. The study argues that knowledge is useful when it is effectively learned; learning is meaningful when

knowledge is accessible. The research stressed that organizations invest in knowledge and learning considerably. However, the return is often not as expected because of poor organizational governance. They emphasize that knowledge and learning governance is neglected because senior management does not support it; most knowledge and learning activities are not visible, which lead senior management to underestimate those activities; employees resist sharing knowledge; and knowledge and learning governance terminology is still ambiguous to the employees (Strong et al., 2008). After conducting interviews in 10 different organizations ranging from banking, governmental, professional services, and energy sectors; the study revealed that some "governance archetypes" (p. 153) are the main obstacle to effective knowledge and learning governance practices. Furthermore, those archetypes are namely business monarchy, IT monarchy, HR monarchy, federal, duopoly, feudal, and anarchic decision making processes (Strong et al., 2008).

Communication problems and perceptions are observed as another obstacle to sharing knowledge. From the knowledge provider's perspective, knowledge sharing doesn't occur when the receiver's capacity to apprehend the message is questionable. On the contrary, the receiver rejects getting involved in knowledge sharing because of uncertainties about the credibility of the knowledge or the knowledge source (Dalkir, 2011). User friendly and reliable knowledge management systems reduce trust related and explicit knowledge sharing issues. However, Feldman (2004) reported that little of the vast amount of accessible knowledge in knowledge repositories has never been used only once. Thus, most of the knowledge sharing activity is still experienced through interpersonal relations as tacit knowledge, which resides within individuals.

Pearson (1999) claims that successful system measurement and delivery of the right knowledge to the right person at the right time are the key concepts for effective knowledge

sharing. System measurements have two dimensions; accumulated intellectual capital and effectiveness evaluation (Van Buren, 1999). Moreover, research proposes that successful knowledge management accomplishments are positively related to performance measurement (Pearson, 1999; Chong& Choi, 2005; Bassi & Van Buren, 1999).

Matzler and Mueller (2011) proposed a model investigating the role of personality traits on knowledge sharing via learning and performance orientation. The study predicted that learning orientation and performance orientation had significant effect on knowledge sharing. This research revealed that learning-oriented employees tend to share knowledge since they consider abilities could be developed and shaped. Conversely, performance-orientation has been found that it has a significant negative relationship with knowledge sharing. Performance-oriented people prefer keeping knowledge instead of sharing because of outperforming coworkers (Matzler and Mueller, 2011).

The organizational climate and culture is another leading factor to hinder or encourage knowledge sharing. It is generally accepted that successful knowledge management and sharing implementations emerge from knowledge friendly environments (Chong& Choi, 2005; Chase, 1997; Ryan & Prybutok, 2001). Organizational views and cultural practices facilitate knowledge-based activities (Chong& Choi, 2005). An organization that promotes and rewards collective work generates a trustful work climate. On the contrary, an organizational culture that is based on social status discourages knowledge sharing. Organizational climates where individualistic values prevail hinder knowledge flow (Dalkir, 2011). Pettigrew (1990) asserts that organizational culture is a crucial element to organizational change. Gumpley (1998) emphasizes that convincing people to contribute knowledge management repositories is much more challenging than building technological infrastructure. McDermott and O'Dell (2001) report that numerous

attempts to convert knowledge based organization failed because individuals believed that they already share their knowledge enough. Therefore, organizational culture and climate are regarded as bigger challenges than technical problems (Forbes, 2000).

Knowledge Management and Sharing in Law Enforcement Agencies

Police work is dynamic, stressful and complicated compared to other governmental jobs. Because of the work's nature, police officers share knowledge with each other more often than the other civil servants (Collier, 2006; Luen & Al-Hawamdeh, 2001). Collier, John, and Duncan (2004) emphasize the importance of knowledge management in the law enforcement field. They argue that knowledge management comprises capturing, sharing, storing, and using knowledge in police work. In their study, they found that there is a positive relation between organizational performance and knowledge management. In addition to Collier et al.'s study (2004), Hauk and Chen (1999) stress that knowledge management systems play a critical role in preventing crimes, foreseeing criminal trends, and fighting criminal activities.

In terms of organizational behaviors, police forces have more similarities across countries than differences (Crow, Lee & Joo, 2012). Nickels and Verma (2008) emphasize that priorities and styles in policing in Canada, Japan, and India comprise significant kinship regardless of cultural differences. However, law enforcement agencies collect and share information regarding criminal activities in their own ways. In Canada, for example, police organizations are not centralized in terms of knowledge management and sharing. Each agency has its own system. Nevertheless, the Canadian federal police use an information system called the Canadian Police Information Center (CPIC) to assist all local police agencies (Gultekin, 2009). Likewise, the Australian Federal Police distributes and collects information by using a database named PROMIS through its own personnel and offices established in every state (Pekgozlu, 2003).

Collier (2006) emphasizes that intelligence includes actionable knowledge. He argues that institutionalization of individual learning generates improved organizational performance. Traditionally, police work is considered reactive. Since the public expectation from police forces varies from violent crimes to road incidents, police have to prioritize actions to use its fixed budget effectively. Therefore, he recommends an intelligence management model to convert police resources from reactive usage to proactive actions in order to prevent crime and improve performance (Collier, 2006).

Holgersson, Gottschalk, and Dean (2008) state that knowledge in law enforcement agencies are in two forms; theoretical knowledge and practical knowledge. The study suggests that theoretical knowledge is acquired and shared in formal education but acontrary and practical one is obtained and disseminated for work on the streets (Holgersson et al., 2008). The research was conducted among Swedish Police officers and revealed that there is a distinction toward approaching knowledge related issues between high ranking officers and front line officers. While the former group employs a theoretical point of view to solve the problems, the latter group deals with daily life issues at street-level. Thus, this separation creates a gap or a polarization that prevents effective knowledge sharing.

Many other studies on knowledge management in law enforcement have been conducted in countries, such as Singapore, England, and Sweden. According to Luen and Al-Hawamdeh (2001), similar to in business, clientele in the public area request a better service. However, officers due to their poor knowledge sharing practices waste public resources. Ineffective knowledge sharing adversely influences productivity of employees in governmental organizations (Holgersson et al., 2008). Also, lack of trust, cultural dissimilarity, and

organizational culture may have a negative impact on knowledge sharing practices in police organizations (Bundred, 2006).

Although, there are few studies about the Turkish National Police (TNP), similar problems and implications are presented in these studies. For instance, Celik (2009) states that because the TNP does not have well-organized, planned, and strategic mechanisms to deal with knowledge of the organization, the knowledge is lost within the organizational environment, which prevents the officer from accomplishing organizational goals. The culture of the TNP is based on solitude and commonality, which has adverse effects on sharing knowledge. Therefore, the TNP has experienced enormous problems related to knowledge sharing (Gultekin, 2009).

Securing the Knowledge within the Organization

Organizations are established groups that follow a systematic pattern of existence (Rollett, 2003). Organizations depend on a hierarchy of systematic operations that basically involve the conditional function of different individuals as well as agencies connected with the group (Handzic, 2004). Organizational structure is the general framework, which is hierarchical and thus the basis for an organization's arrangement of communication between authority levels. In addition, it defines the extent to which responsibilities, authorities and roles available undergo, control, and maximize assignments. This emphasizes the information flow in the degree of operation in an organization (Alavi & Tiwana, 2002). In addition, it can influence the manner a firm arranges its tasks and members in order to perfect its chores, hence, meeting set goals.

Nevertheless, at the turn of the 21st century, communication has become the backbone of every organization's extensive course of progression (Fullan, 2001). Further, it has been realized that its effect on organizational development is rather more concentrated on how people connect and how that connection works to establish a team-based operation working toward creating a

more defined relationship that the team members can depend upon. Knowledge management basically creates a form of learning on both a team level and an individual level at the same time (Handzic, 2004).

There are several theories proposed to secure organizational knowledge or intellectual assets within organizational repositories; contingency theory, risk management theory, management system theory, security policy theory, and control and auditing theory are the major system-oriented theories of information security management.

Contingency theory proposes a policy established on risk management strategy, management system strategy, and control and audit strategy. According to risk management theory's approach; risk assessment, risk control, review and modification are key requirements. Management system theory asserts that an information security system is required to establish security policy, definition of security scope, and risk management and implementation. Security policy theory is defined on three pillars; information security, information security policy, and information security establishment. And control and auditing theory recommends creating and implementing control systems in addition to information auditing (Hong et al., 2003).

Hong et al. (2003) noted that several of the theories overlap in some extent, thus, they proposed another theory, named integrated system theory. The theory is an integrated format of the former theories. Integrated system theory emphasizes that there are three significant points emerging from information security concerns; information security policies, internal control requirements, and contingency management procedures.

Risk data repository model (RDR) is another model that has been developed for the finance sector to protect network and data security. This model is focusing on how information is

gathered and represented in a large network environment without security concerns. It has three components; environment, platform, and assets (Kwok & Longley, 1999).

Economic modeling of information security is proposed to improve risk management issues in organizations. This model suggests methods to identify the assets of and the threats against the organization, and finding the weaker areas of information and communication technology systems (Bojanc & Jerman-Blazic, 2008).

DeLone and McLean (1992) suggested a multidimensional model of information security after discussing several factors contributing to evaluating success withmeasuring success the major argument. Thus, they recommended several aspects such as efficiency, design, usability, and cost in evaluating information security systems.

Knowledge Management Models

Davenport and Prusak (1998) stress the distinction between data, information, and knowledge operationally. They argue that information is transformed to knowledge through knowledge creating activities such as assessments, consequences, influences, and exchanges. Nonaka and Takeuchi (1995) highlight the dynamic nature of knowledge. They argue that innovation is a byproduct of knowledge. The success of an organization in creating new knowledge is correlated to its capacity to disseminate it through members and utilize it in production and service (Nonaka & Takeuchi, 1995; Dalkir, 2011). Research has many examples of conceptual frame works and knowledge management models, which are explaining how these knowledge management activities, operate.

According to the organizational epistemology model, knowledge exists at both the individual and the social level. Von Krogh and Roos (1995) classify knowledge into two groups; individual knowledge and social knowledge. They emphasize that the existence of knowledge is

possible by a knower. They suggest that knowledge creation process continues in five steps and each step is fragile. It starts in individual mindset, continues with communication in the organization. If the organizational structure and relations within the members are not encouraging due to lack of trust or respect, knowledge creation does not occur. Cristea and Capatina (2009) argue that knowledge exists with the connections representing them in the mindset of human beings. These links or networks form the collective knowledge. Moreover, the contributors to the organizational knowledge need recognition by the top management or the reward system to keep up the motivation (Dalkir, 2011).

Nonaka and Takeuchi's spiral model (1995) argues that Japanese companies are successful to create new knowledge and innovation because of the cultural difference from Western companies. They emphasize that the bearer-knower-, environment, and knowledge are not separate entities. Therefore, knowledge conversion, transfer, and sharing are simpler since knowledge is found within the group. In addition, Japanese language and culture, which is influenced from Zen Buddhism promotes self-dedication to the community and group success. Thus, Japanese enterprises effortlessly convert and disseminate tacit knowledge to explicit form (Dalkir, 2011).

Nonaka (1994) asserts that knowledge conversion happens in four modes; namely socialization, externalization, combination, and internalization. Socialization is defined as sharing knowledge through direct social interactions. This is easily the most common form of knowledge conversion since it can occur wherever human interaction is possible. Externalization is defined as converting tacit knowledge to explicit knowledge. Most of the time this stage requires and intermediary to write, to record or to transform knowledge into a tangible format for future use. The third mode is called combination. In this stage tangible knowledge is changed

into new formats depending on user needs; such as a summary of a report or pulling key information out of a statistical analysis. The last stage, internalization, is a learning process from explicit knowledge. In this stage individuals convert explicit knowledge into their tacit knowledge (Dalkir, 2011).

Wiig (1993) argues that knowledge is useful and valuable when it is organized. The Wiig knowledge management model proposes that we store knowledge semantically in our mental models. When knowledge is needed, we adopt the fitting viewpoint depending on the cognitive task. The model classifies the knowledge user in terms of internalization levels: novice, beginner, competent, expert, and master (Cristea & Capatina, 2009). Wiig (1993) defines knowledge in three forms: 1) Public knowledge, which is accessible through public domains, 2) Shared expertise, which represents intellectual assets that are used by employees, or kept in knowledge repositories at work, and 3) Personal knowledge, which is rooted in the mind and applied without thinking in daily activities or work related tasks (Dalkir, 2011).

Organizational Citizenship Behavior

When Dennis Organ published his remarkable book *Organizational Citizenship Behavior: The Good Soldier Syndrome*in 1988, researchers had been studying on-the-job-satisfaction and employee effectiveness since 1920s. However, it wasn't until Katz's (1964) article that"citizenship" in the organization was verbalized metaphorically. Organ (1988) improved the notion into a systematic definition as follows:

> Organizational Citizenship Behavior (OCB) represents individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization. (p.4)

Organ (1988) argued that OCB aggregated organizational effectiveness. He suggested that effective organizations are reflected through high efficiency in accommodating resources.

By doing that, costs are reduced and competitiveness in prices is increased. Moreover, securing tangible and intangible assets within the organization is possible with organizational effectiveness (Organ, 1988).

Borman and Motowidlo (1992) assert that OCB can be observed either in a role-prescribed behavioror as an extra role behavior. It is considered as a part of the job description to be courteous and helpful for serving clients in the service sector and for front line employees in the public sector. On the other hand, it may be an extra role behavior for some professions (Organ, 1997). Therefore, OCB is emphasized as sum of the best efforts at work regardless of the job descriptions (Borman & Motowidlo, 1992). Either job description requirement or extra role behavior, OCB's main concept promotes organizational performance (Organ, 1997).

Research has several propositions regarding OCB dimensions. Smith and colleagues (1983) emphasized altruism and generalized compliance as the fundamental OCB dimensions. Another two-dimensional categorization came from Williams and Anderson (1991): OCB that is intended for the organization and OCB that is intended for people.

Organ (1988) proposed an OCB model with five major behaviors; altruism, courtesy, civic virtue, conscientiousness, and sportsmanship. Altruism is defined as a helping behavior observed in job related issues. Courtesy is informing protecting colleagues about work related problems that have been experienced. Civic virtue is a behavior observed when an individual gets involved in, becomes concerned over, and participates in company's activities. Conscientiousness is defined as an individual behavior that emerges as observing rules and regulations beyond minimum requirements regardless of control. Sportsmanship is described as being tolerant in favor of the organization (Podsakoff et al., 1990).

Podsakoff and colleagues (1990) published research about the effect of transformational leadership behavior on OCB, trust in leadership, and job satisfaction among followers. In this study, they developed an instrument to measure Organ's five-dimensional OCB model (Podsakoff et al., 1990). Furthermore, Podsakoff, Mackenzie, Paine, and Bachrach (2000) revisited OCB literature and posited that OCBs can be found in 30 different forms. They grouped those under seven dimensions: 1) helping behavior 2) sportsmanship 3) civic virtue 4) organizational loyalty 5) individual initiative 6) organizational compliance and 7) self-development (Podsakoff et al., 2000; Shim, 2011). Even though there are some similarities with Organ's (1988) grouping, there are distinctive points in definitions. For example, helping behavior in this grouping combined altruism and courtesy behaviors in Organ's OCB dimensions (Shim, 2011).

Organ and colleagues (2006) outlined OCBs from previous research: self-development and projection to the organization (Katz, 1964), helping and compliance (Smith et al., 1983), cheerleading, and peacemaking (Organ, 1990), loyalty (Graham, 1991), sportsmanship, civic virtue, and courtesy (Konovsky & Organ, 1996). In this summary, self-development is defined as improving work related skills voluntarily; protecting the organization refers to taking necessary actions when it is needed to save the organizations' resources or reputation. Helping behavior is overall empathy to assist coworkers and clients. Compliance refers to being aware of and responsive to rules and regulations. Cheerleading is enchanting the work environment and giving praise due to the accomplishments and contributions of colleagues. Peacemaking behavior refers to resolving issues before they escalate into conflicts. Loyalty is defined as promoting the organization in a positive light outside of the organization. Sportsmanship refers to respecting others and to avoid complaining over small issues. Civic virtue behavior means to attend

meetings and get involved in activities within the organization even though they are not mandatory. Courtesy is being conscientious about coworkers and the organization in terms of not creating unnecessary problems (Long, 2012; Organ et al., 2006).

Al-Zu'bi (2011) investigated the OCB and its impact on knowledge sharing according to Organ's (1988) five dimensions among randomly sampled Jordanian pharmaceutical employees. As cited by Organ, he adopted Podsakoff and Mackenzie's scale to measure OCB. He observed that all dimensions of OCB had a positive impact on knowledge sharing. Moreover, sportsmanship, conscientiousness, and altruism were found to be the most influential on knowledge sharing respectively.

Aliei, Ashrafi, and Aghayan (2011) conducted a research about the relationship between OCBs and knowledge sharing in knowledge-based organizations. In the study, OCB dimensions are grouped into 7 namely; 1-helping behavior, 2-spotmanship, 3-organizational loyalty, 4-organizational compliance, 5-individual initiative, 6-civic virtue, and 7-self-development. They argued that creating a knowledge sharing culture is difficult since knowledge is accepted as power. Their study supported that there is a strong and positive relation between OCBs and knowledge sharing (Aliei et al., 2011).

Becton, Giles, and Schrader (2007) posited that evaluating and rewarding OCBs in formal reward and performance appraisal systems bear both advantages and disadvantages. Even though rewarding OCBs increases self-efficacy and leader-member exchange, it may result in losing intrinsic motivation and in potential role conflict (Becton et al., 2007). To reduce the negative consequences, the study recommends practitioners to weight OCBs proportionately to overall job performance evaluation. Another pointed issue was the performance rater's education against regency error, which is placing emphasis on the most recent behavior and the halo effect–

positive feelings about certain employees due to their previous performances (Becton et al., 2007). Becton and colleagues (2007) also emphasized that most OCBs are not exhibited under supervisory presence (e.g. helping, supporting team members, and courtesy) and may not be known by the members of the organization (e.g. representing the organization with dignity). In addition, this research also investigates OCBs negative consequences, adding to previous research.

Organizational Justice

Adams (1963) emphasized that in equity theory fairness is giving and receiving proportionally. The theory suggested that employees put their time, effort and knowledge (inputs) into work in return to receive wages and compensations (outcomes). The balance between inputs and outputs are subjectively judged based on individual perceptions. If the employee thinks that an outcome doesn't fit their input then notion of inequity emerges (Greenberg, 1990a). Adams (1963) aimed to figure out under what circumstances and when the antecedents of inequity arise. He argued that individuals who experience inequity feel pressured andthen they want to restore things to a more equitable situation (Adams, 1963). Adams' equity theory comprises of individual perception (Jamaluddin, 2011). Thus, restoring the perception of inequity into an acceptable level reduces tension at the work place (Weller, 1995). Greenberg and Baron (2003) suggest that altering employee's perceptions about circumstances may reduce the perception of unfairness. Furthermore, it is valuable to promote justice at the work place by considering each justice form separately.

Organizational justice is defined as general perception of fairness in an organization. Existence of organizational justice has been considered an important indicator of employee behavior, attitude, and motivation (George & Jones, 2007). Organizational Justice can be found

in four forms: distributive justice, procedural justice (George & Jones, 2007; Ibragimova, 2006), interpersonal justice, and informational justice (George & Jones, 2007).

Distributional justice is referred to as perceived fair distribution of outcomes such as promotions, payments, and a desirable work environment. Procedural justice is the judgment of the procedures exercised to make decisions for distributions of outcomes. Performance assessments and allocations within the organization can be examples (George & Jones, 2007; Ibragimova, 2006). Interpersonal justice is the perceived fairness of the interpersonal treatment implemented by the distributors of outcomes, or in other words managers. Employee perception of informational justice is defined as the explanation of the decision-making process and procedures implemented based on these decisions (George & Jones, 2007).

There has been quite a discussion among researchers about organizational culture and organizational climate. While an organizational climate constructs explicit dimensions of the organization such as reward systems, and promotion, organizational culture bears a system of meanings that explains organizational behavior, stories, and special language. An organizational climate includes established structures that control relations (Ibragimova, 2006). The researcher assumes a positive relation between a conductive organizational climate, subjective norm, and intention toward knowledge sharing.

In their study, Simons and Roberson (2003) investigated that how collective procedural justice and interpersonal justice perceptions affected the organizational outcomes. The study was conducted in 111 different hotels in US and Canada among 13, 239 employees through employee surveys. Simons and Roberson (2003) measured the justice perceptions; commitment, guest satisfaction, and intent to remain with the organization, and employee turnover. The results revealed that procedural and interpersonal justice perceptions contribute overall organizational

outcomes in variations. Moreover, the operational and management level success is observed through collective organizational justice perceptions of employees'. This finding suggests improving fair treatment of employees for competitiveness and commitment (Simon & Roberson, 2003).

Jamaludin (2011) examined organizational justice perception as antecedent of organizational commitment. In the study, commitment concept is discussed in three forms: affective commitment, which is emotional attachment to the organization, normative commitment, which is responsibility to the organization, and continuance commitment, which are combined as consequences associated with leaving the organization (Jamaludin, 2011). The research conducted among 290 academic staff employed in a public learning institution. This study found that organizational justice forms have significant effects on the development of commitment. Moreover, distributive justice was observed as significant influence on remaining with the organization. However, motivation factors are differentiated as material motivation factors and non-material motivation factors. As the employees motivated by the earlier are concerned on distributive justice, the later motivated employees are focused on procedural justice (Jamaludin, 2011).

Crow, Lee, and Joo (2012) published an article that is investigating indirect influence of organizational justice perception on Korean police officers' organizational commitment. A survey conducted among 418 police officers to examine relations between organizational justice forms, job satisfaction, and organizational commitment. The study explored the relationship between organizational justice and organizational commitment using job satisfaction as a mediator. Crow et al. (2012) argued that procedural justice and interactional justice influenced the distributive justice perception, not organizational commitment. They found that there is

significant relation between organizational commitment and distributive justice when it is supported with other justice forms. Nevertheless, the influence of distributive justice perception was not significant when job satisfaction added as a mediator to the proposed model. The study proposes that supervisors are the key factors to nurture officers' perception of justice as they develop good relationship with their subordinates and evaluate them with fairness and well-defined standards (Crow et al., 2012).

CHAPTER 3

METHODOLOGY

Introduction

The proposed research model is based on Ajzen and Fishbein's (1980) the theory of reasoned action (TRA). The primary concern of the study is to unveil how much organizational justice perception influences subjective norms and attitudes toward knowledge sharing and on individual intention to knowledge sharing.

This section describes the research design and methodology that is utilized to conduct the proposed study. In this chapter, the researcher provides a detailed explanation about the research questions and the hypotheses emerging from them, the proposed research model and its variables, validity and reliability concerns, data collection method and data analysis plans, scope and limitations, and ethical considerations.

Research Design

Studies are conducted for identifying, uncovering, and explaining facts in any field or environment (Marshall & Rossman, 1989). According to Marshall and Rossman, (1989) survey and experimental research are approaches used by researchers who examine the relationship between fixed concepts and standard variables.

A research design is the outline of data collection and analysis. Research design choice shows the priorities of the research process (Bryman, 2008). A cross-sectional research design, which is commonly associated with questionnaires and structured interviews, is utilized for this dissertation.

A self-administered questionnaire survey design, a prevalent instrument of data collection method in quantitative research, is the research method. In social studies, the survey design

method has been preferred since it can be generalized from. Moreover, surveys are valuable tools to explain human behaviors in a group or social environment (Bryman, 2008). The researcher utilizeda mail questionnaire form to collect data. In the social sciences, survey designs are preferred because of their relation to human perceptions and beliefs.

Prior research with this topic suggests that a self-administered questionnaire has significant advantages over structured interviewing; such as low-cost, faster to administer, absence of interviewer effects or variability, and convenience for respondents (Bryman, 2008). In addition, the researcher cannot manipulate the environment of the participants' experience.

Proposed Research Model

In quantitative research, theories and models originate the questions (Creswell, 2009). Thus, the current research is based on a model set forth by Ajzen and Fishbein's (1975; 1980) describing the theory of reasoned action (TRA). TRA is used as a framework in several studies about knowledge sharing, including Bock et al.'s (2005), Ibragimova's (2006), and Tao's (2008). Moreover, the researcher found consistency with the literature reviews of knowledge sharing practices and Fishbein and Ajzen's (1975; 1980) theory of reasoned action.

Bock et al.'s (2005) model is modified from the original TRA. The modified model deviates from the original TRA with an organizational climate construct and the role of motivational drivers. In addition to attitude and subjective norm, Bock et al. (2005) emphasize that employees are influenced to share knowledge in three broad categories; economic (anticipated extrinsic rewards), social-psychological (anticipated reciprocal relationships and sense of self-worth), and sociological (fairness, innovativeness, and affiliation).

Ibragimova (2006) substituted extrinsic rewards and reciprocal relation in Bock et al.'s (2005) model with perceived organizational justice constructs. Even though keeping the

organizational climate construct, Ibragimova (2006) extended it with rewards, warmth, and support dimensions. These dimensions improved her model in understanding the role of culture and climate immensely.

Tao (2008) made a unique contribution to information seeking behavior studies with a new model, the information resource selection and use model (IRSUM), which is based on Fisbein and Ajzen's (1980) TRA and Davis's (1989) technology acceptance model (TAM). The model proposed uncovering the influence of resource characteristics, individual differences, and the environment of the library as the users select and use information resources (Tao, 2008).

In the proposed model, the researcher integrated perceived organizational justice and organizational citizenship behavior constructs to the original TRA constructs, which are attitude toward knowledge sharing, subjective norm, and intention to share knowledge (see figure 3). Furthermore, the researcher investigated direct and indirect (through attitudes, motivation to comply, and normative beliefs) influence of organizational justice perception on knowledge sharing intention. Additionally, this study seeks the direct relation of individual characteristics combined under organizational citizenship behavior (OCB) on intention to knowledge sharing. Furthermore, the influence of demographic variables such as gender, post location, education level, role at work, and contract type or rank has been investigated.

Demographic factors are considered as control variables, which are not shown in proposed model. Four of the constructs in the model are hypothesized to have positive influences on intention to share knowledge.

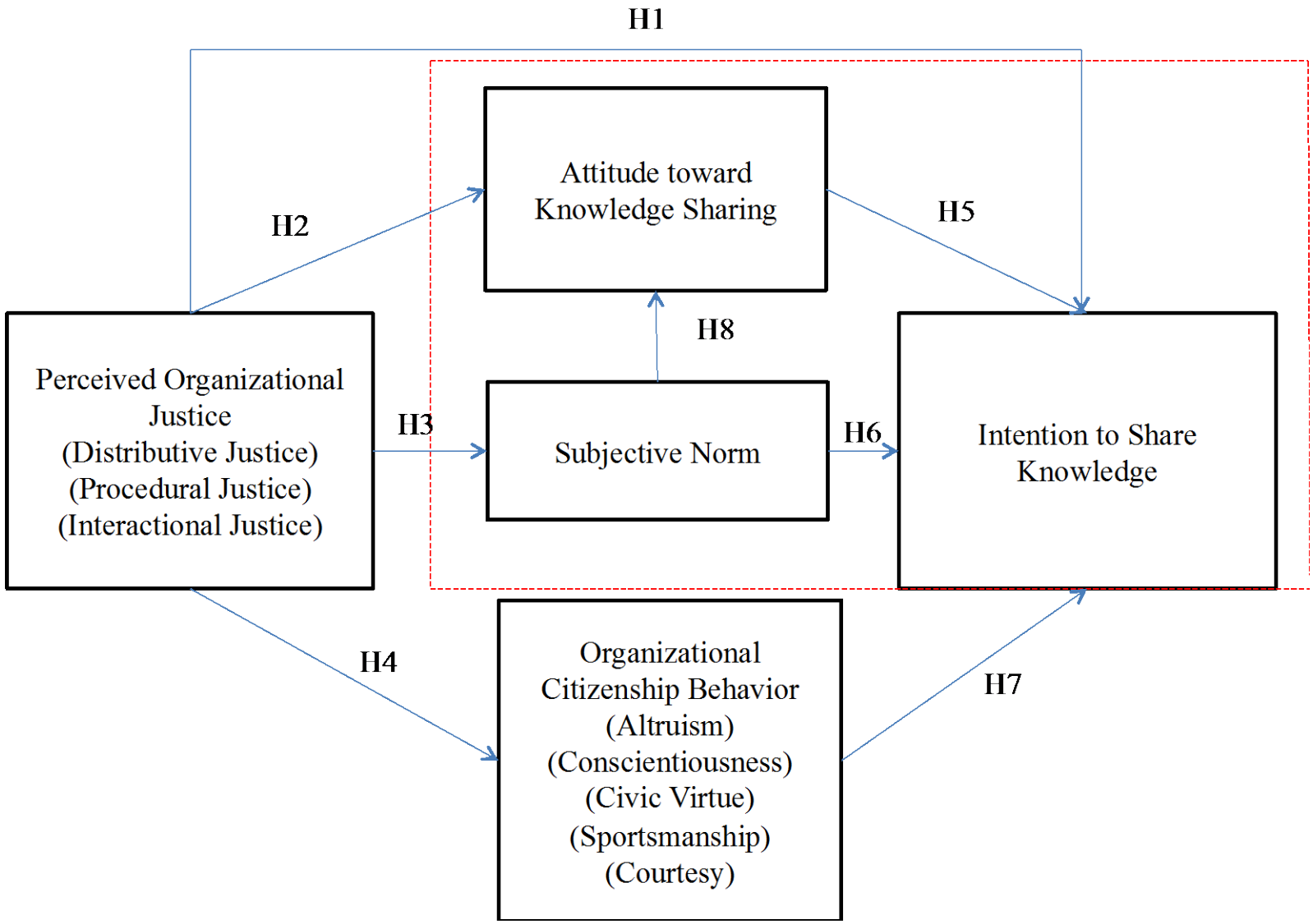

Figure 3. Proposed research model with hypotheses.

Research Questions and Hypotheses

RQ_1: How do perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior influence intention to share knowledge?

H_{01}: The greater the extent to which perceived organizational justice is toward being conducive to knowledge sharing, the greater the intention to share knowledge is.

H_{05}: The more favorable the attitudes toward knowledge sharing are, the greater the intention to share knowledge will be.

H_{06}: The greater the subjective norm is toward knowledge sharing, the greater the intention to share knowledge will be.

H_{07}: The stronger the organizational citizenship behavior is, the greater the intention to share knowledge will be.

RQ_2: How do perceived organizational justice and subjective norm influence attitudes toward knowledge sharing?

H_{02}: The greater the perceived organizational justice is, the more favorable the attitudes toward knowledge sharing will be.

H_{08}: The greater the subjective norm is toward knowledge sharing, the more favorable the attitudes toward knowledge sharing will be.

RQ_3: How does perceived organizational justice influence subjective norm?

H_{03}: The greater the perceived organizational justice is, the greater the subjective norm to knowledge sharing will be.

RQ_4: How does perceived organizational justice influence organizational citizenship behavior?

H_{04}: The greater the perceived organizational justice is, the stronger the organizationalcitizenship behavior will be.

Instrument Design and Construct Items

The constructs in this research have been adopted from the previous studies. The items measuring the constructs were justified and validated in those earlier studies. Data is collected through these questionnaires. Since the measuring items and constructs have been adopted from previous research and the Cronbach's alpha values for each construct are ranged from .75 to .90, the researcher did not conduct a pilot study to confirm validity and reliability of the instrument. Research suggests that there is no cut off point for Cronbach's alpha values; however, over .70 has been accepted as the lower limit in general (Ibragimova, 2006). All of the items will be measured by a 5 point Likert scale ranging from 5 intended for *strongly agree* to 1 intended for *strongly disagree*. The demographic questions are asked at the last part of the questionnaire.

As the study is conducted in a Turkish speaking population, translation into Turkish within the context is essential. In order to distribute a clear and understandable questionnaire, the researcher requested two Turkish nationals with graduate degree in Information Science to translate the adopted survey items into Turkish. Afterward, the researcher designed a draft in Turkish using the two translations. Subsequently, the researcher submitted the draft two different Turkish nationals with advanced degrees in sociology and public administration to re-translate into English. The researcher compared the latest English version with the original survey items and found them consistent and having the same meaning. This verified for the researcher that the draft in Turkish can be used for the study. Table 1 extends the survey constructs, measuring items, and the studies they are adopted from.

Table 1

Survey Items

	Constructs	Items
Matthew S. Crow, Chang-Bae Lee, Jae-Jin Joo, (2012) "Organizational justice and organizational commitment among South Korean police officers: An investigation of job satisfaction as a mediator", Policing: An International Journal of Police Strategies & Management, Vol. 35 Iss: 2, pp.402 – 423	**Perceived Organizational Justice: Procedural Justice**	Evaluation is fair regardless of social networks related to education and location
		Performance evaluation fairly reflects what employees have performed
		Outside pressure does not influence performance evaluations
		Standard criteria are used for evaluations
		Employees and supervisors communicate during the evaluation period
	Perceived Organizational Justice: Interactional justice	My supervisor respects my opinion
		My supervisor avoids personal prejudice
		My supervisor treats me kindly
		My supervisor respects my rights as a subordinate
		My supervisor tries to be honest with me
	Perceived Organizational Justice: Distributive justice	I am rewarded for my work
		Rewards are fair and fit with my previous work experience
		I am rewarded fairly for what I do for the organization
		Performance evaluations reflect my job responsibilities
		Performance evaluations reflect my job difficulty
Bock, G.W., Zmud, R.W., Kim, Y.G. and Lee, J.N. "Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social Psychological Forces and Organizational Climate," *MIS Quarterly* (29:1), 2005, pp. 87-111.	**Attitudes Toward Knowledge Sharing**	My knowledge sharing with other organizational members is good.
		My knowledge sharing with other organizational members is harmful.
		My knowledge sharing with other organizational members is an enjoyable experience.
		My knowledge sharing with other organizational members is valuable to me.
		My knowledge sharing with other organizational members is a wise move.

(table continues)

Survey Items (continued)

Bock, G.W., Zmud, R.W., Kim, Y.G. and Lee, J.N. "Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social Psychological Forces and Organizational Climate," *MIS Quarterly* (29:1), 2005, pp. 87-111.	**Subjective Norm: Normative beliefs on Knowledge Sharing**	My CEO thinks that I should share my knowledge with other members in the organization.
		My boss thinks that I should share my knowledge with other members in the organization.
		My colleagues think I should share my knowledge with other members in the organization.
	Subjective Norm: Motivation to comply	Generally speaking, I try to follow the CEO's policy and intention.
		Generally speaking, I accept and carry out my boss's decision even though it is different from mine.
		Generally speaking, I respect and put in practice my colleague's decision.
Podsakoff, P. M., MacKenzie, S. B., Moorman, R. H., & Fetter, R. (1990). Transformational leader behaviors and their effects on trust, satisfaction, and organizational citizenship behaviors. *The Leadership Quarterly, 1,* 107-142.	**Organizational Citizenship Behavior: Altruism**	I help others who have been absent.
		I help others who have heavy workloads
		I willingly help others who have work related problems.
		I help orient new people even though it is not required.
		I am always ready to lend a helping hand to those around me.
	Organizational Citizenship Behavior: Courtesy	I take steps to try to prevent problems with other workers.
		I am mindful of how my behavior affects other people's jobs.
		I do not abuse the rights of others.
		I try to avoid creating problems for coworkers.
		I consider the impact of my actions on coworkers.
	Organizational Citizenship Behavior: Civic Virtue	I attend meetings that are not mandatory, but are considered important.
		I attend functions that are not required, but help the company image.
		I keep abreast of changes in the organization.
		I read and keep up with organization announcements, memos, and so on.

(table continues)

Survey Items (continued)

	Organizational Citizenship Behavior: Sportsmanship	I consume a lot of time complaining about trivial matters. (R)
		I always focus on what's wrong, rather than the positive side. (R)
		I tend to make "mountains out of molehills." (R)
		I always find fault with what the organization is doing. (R)
		I am the classic "squeaky wheel" that always needs greasing. (R)
	Organizational Citizenship Behavior: Conscientiousness	My attendance at work is above the norm.
		I do not take extra breaks.
		I obey company rules and regulations even when no one is watching.
		I am one of the most conscientious employees.
		I believe in giving an honest day's work for an honest day's pay.
Bock, G.W., Zmud, R.W., Kim, Y.G. and Lee, J.N. "Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social Psychological Forces and Organizational Climate," MIS Quarterly (29:1), 2005, pp. 87-111. Ibragimova, B. (2006). Propensity for knowledge sharing: An organizational justice perspective. Ph.D. dissertation, University of North Texas, United States -- Texas. Retrieved September 26, 2011, from Dissertations & Theses @ University of North Texas.(Publication No. AAT 3227008).	**Intention to share knowledge: Explicit Knowledge**	I will share my work reports and official documents with members of my organization more frequently in the future.
		I will always provide my manuals, methodologies and models for members of my organization.
		I intend to share any articles from newspapers/magazines/journals that I find useful and related to our work with members of my organization.
	Intention to share knowledge: Tacit Knowledge	I intend to share my experience or know-how from work with other organizational members more frequently in the future.
		I will always provide my know-where or know-whom at the request of other organizational members.
		I will try to share my expertise from my education or training with other organizational members in a more effective way.

Endogenous (Dependent) Variable

Intention to Share Knowledge

The endogenous (dependent) variable is "intention to share knowledge," which is a subjective likelihood of sharing work related knowledge. Previous empirical studies such as Bock et al.'s (2005) and Ibragimova's (2006) justify and support empirically this variable.

As referred to in Bock et al. (2005), intention to share knowledge is an individual enthusiastic behavior that promotes transferring tacit and explicit knowledge among members of the cluster or group. In this study, intention to share knowledge among the forensic laboratories' employees in TNP is the dependent variable. Even though it is a latent variable, it has been empirically tested, supported and justified in several studies, including Bock et al. (2005) and Ibragimova (2006). Selecting "intention" instead of "knowledge sharing" is to prevent ex-post-facto problems. In fact, intention is a better indicator in voluntary settings than actual behavior (Sun &Zhang, 2005).

The researcher applied the 6-item construct to measure intention to share knowledge from Bock et al.'s (2005) and Ibragimova's (2006) studies, in which the Cronbach's alpha values were reported as .93.

Exogenous (Independent) Variables

Organizational Justice Perception

Organizational justice is a general reference to the fairness in a work environment. It is observed in three forms: distributive justice, procedural justice, and interactional justice (George & Jones, 2007; Ibragimova, 2006). The researcher used 15-item constructs based on 5 items for each organizational justice form, adopted from Crow et al.'s (2012) study conducted among

South Korean police officers. The rationale behind using Crow et al.'s (2012) questionnaire is it has been studied in a similar population, the Korean Police. Therefore, its wording is easy for translation issues. Crow and colleagues (2012) utilized Moorman's (1991), Leventhal's (1980), and Do's (2002) published items to measure organizational justice forms.

Attitude toward Knowledge Sharing

Attitude toward knowledge sharing refers to an individual's level of affirmative feelings about sharing personal knowledge and experience (Bock et al., 2005). In this study, attitude refers to the forensic experts' positive or negative orientation about the intention to share knowledge. Attitude is influential on both "intention" and "knowledge sharing" in knowledge sharing literature (Bock et al., 2005).

Items measuring this construct are adopted from Bock and colleagues' (2005) research. The Cronbach's alpha value for the original 5-item construct was reported as .91.

Subjective Norm

In the proposed research model, subjective norm is included as a determinant factor on intention to share knowledge. Fishbein and Ajzen (1975) emphasized that subjective norms and attitudes toward behavior constitute behavioral intentions. Subjective norm is defined as social factors that affect someone's intention to comply with the expectations of the people that are valuable to them (Fishbein &Ajzen, 1975; Lin et al., 2004). In addition, subjective norm is a form of social pressure over individuals as they make decisions (Woon & Kankanhalli, 2006). In a business setting competition employees can be observed relating to its nature. However, in public services such as law enforcement agencies, such competition is not directly visible

because of the nonprofit nature of the agency. Instead, law enforcement workers demonstrate peer and agency oriented behavior as indicators of their cultural values (Hu et al., 2005).

The researcher used Bock et al.'s (2005) 5-item construct to measure subjective norm. The Cronbach's alpha value was reported as .82.

Organizational Citizenship Behavior

Denis Organ (1988) defines organizational citizenship behavior (OCB) as exceeding work ethics and qualities, which are not compensated by the reward system but are highly influential for on job performance and satisfaction. He suggested that a higher level of OCB improves organizational effectiveness and generates attraction for new resources. Organ (1988) classified OCB into 5 factors: altruism, courtesy, civic virtue, sportsmanship, and conscientiousness.

Hofstede (2012) emphasizes that the dominant characteristics of Turkish national culture are being obedient to supervision, collectivistic, and feminine. Gultekin (2009) argues that camaraderie and segregation are observed in the TNP as significant characteristics of the organizational culture. The hierarchical structure of the TNP together with cultural characteristics is another influential factor on knowledge sharing. However, explaining OCB is not possible with national culture and occupational sub-culture.

Since OCB is considered a predictor of affiliation, the researcher assumes that there is a correlation between knowledge sharing behavior and OCB. The researcher used Podsakof and colleagues' (1990) 24-item to measure the OCB construct. In the original research, all factors were reported internally consistent with over .70 alpha values.

Control Variables

This research consists of five control variables namely, gender, location of the post, education level, role at work, and type of employment or rank. These variables represent the organizational and demographic characteristics of the respondents which may lead the researcher find meaningful relation within the other constructs of the study.

Population and Sampling

The TNP is the only law enforcement agency in Turkey providing public security service in cities with more than 200,000 sworn officers and professionals (Tombul, 2011). The organizational structure of the TNP, which is led by the General Director of the Security, is broken down into two main categories: central units and provincial units (Ozcan & Gultekin, 2000). The central units in the TNP establish general strategies; provide technical support and facilitate cooperation within the organization (Cerrah, 2006).

The Department of Police Forensic Laboratories is one of the central units and has 10 regional laboratories that assist provincial police units and public prosecutors. A forensic laboratory in the TNP is constructed of three basic units: expertise, support, and secretariat units (DPFL, 2012). The expertise units, referred to as core units, are ballistic investigations, document analyzing, chemical investigations, biological investigations, data, and voice and image analyzing, and the explosives unit. The support units are budget and supply, training, and human resources units. The secretariat is an administrative unit set up in the headquarters to coordinate relations in the departmental and organizational levels. The population for this study is defined as forensic experts, assistants and technicians in 10 forensic laboratories established under the Department of Forensic Laboratories in TNP. The sample size is around 600 people,

whose ages, genders, units and ranks are considered in order to represent the population correctly.

According to Teddy and Tashakkori (2003), the unit of analysis is central to the data collection process. In other words, it is the main object to analyze in the research. Individual cases, groups of cases, and social organizations, which are the subjects the researcher focuses on in any study, are the most common examples of unit of analysis (Teddy & Tashakkori, 2003). In this research, the unit of analysis is the forensics who works for forensic laboratories in the TNP. The critical factor to drawing sample is correct representation of the population. Kline (1991) suggests that acceptable sample size should be 10 times, ideal sample size should be 20 times more than the research parameters.

The purposive sampling method is used. Kerlinger (1986) suggests that purposive sampling gives the researcher the flexibility of sample selection with specific aspects. Since not all of the employees in the department of police forensic laboratories are forensic experts, to frame the research with their organizational justice perceptions and knowledge sharing intentions, the sample is selected from among forensics employed in expertise units and whose work is described as investigating evidences using forensic sciences methodologies.

Data Collection

Before the data collection, the researcher met the requirements set forth by the University of North Texas Institutional Review Board (IRB). The researcher has a general research approval form given by the General Directorate of Turkish National Police (TNP) to the members of the TNP who are pursuing a master or doctoral degree, to collect data, to conduct surveys, and to retrieve statistical data from all TNP departments including the central (HQ) organization.

Before conducting the questionnaire, the researcher requested an updated list of forensic experts and their contact information from the Department of Police Forensic Laboratories at the TNP Headquarters. The researcher contacted the officers in charge from all 10 forensic laboratories and informed them about his intention. With their permission, the surveys were sent to the administrative offices. The officers in the administrative offices distributed each survey questionnaire to the respective participants' pigeon holes.

During the survey processes, copies of the IRB permission, its translation, and the TNP approval were shown to the participants. Also, the researcher asked participants' permission and explain what he is planning to do with the data. No physical or emotional harm is done while collecting the data. In the survey, participants are coded only by their demographics. In order to keep the anonymity of the respondents, names were not requested from respondents at any point during this study.

This research is a postal questionnaire including demographic questions (see Appendix). A consent form is attached as the first page of the survey. The self-administered questionnaire is distributed to responders by mail and is requested to be returned in the same way. In order to improve response rate, the researcher explained the following in cover letter and consent form; the initial question for the research, why this research is important, the reason for being selected and the confidentiality assurance. Two to three weeks after the initial mailing, the researcher posted a reminder letter with the questionnaire to non-responders. Research suggests that if the response rate is remarkably low, the reminding letters are inevitably important (Bryman, 2008). Even though Mangione's (1995) classification, over 50% response is considered acceptable in postal questionnaires, a great number of researches have been published with lower response rates (Mitchell, 1985; Bryman, 2008).

Data Analysis Plan

In this study, the most holistic approach to data analysis is to be using path analysis. As a statistical method, path analysis can be positioned between a multiple regression analysis and a special type of structural equation modeling (SEM). Similar to SEM, path analysis allows the researcher to look at the proposed research model at once. In SEM, the researcher calculates each item's contribution to a particular construct, whereas in path analysis, an average or total score of items in a construct is taken under consideration. By doing that, it is possible to see how the constructs are related to the model. Moreover, path analysis still allows the researcher to investigate each of the organizational justice forms and OCB factors separately (Lleras, 2005).

The data analysis was conducted in two steps of preliminary analysis and primary analysis. First, the preliminary analysis was conducted using IBM® SPSS version 19. Descriptive statistics of the demographics included frequencies and percentages of categorical variables including gender, location of the post, education level, role at work, and type of employment or rank. The relationships among the demographic variables were tested using Pearson's correlations, one-way analysis of variance (ANOVA), and cross tabulations with Pearson's chi square. Demographics that do not have a normal distribution were grouped into categories.

The data for each survey item was analyzed using Cronbach's alpha in order to confirm that the items for each factor are reliable. Any problems in reliability were investigated using principle components of factor analysis, which resulted in eliminating items that are not reliable. Once the items for each factor were confirmed, factor scores were computed using the mean of each set of items as specified in Table 1. Each of these factor scores were tested to check for normal distribution and outliers and described with means and standard deviations. The

relationships among factors were computed with Pearson's correlation coefficients (or Spearman's in the event that they were not normally distributed). In addition, the relationship of each factor with each demographic variable was tested with correlations and ANOVAs.

The primary analysis was then conducted using simple and multiple linear regressions and path analysis. Simple linear regression was used to look at the individual effects of each variable on the dependent variable of intention to share knowledge. In addition, explicit knowledge and tacit knowledge was very highly correlated and therefore were not examined individually. Multiple linear regressions were employed to test the combined effect of the predictors on intention to share knowledge.

Although the regression analysis was illuminate the individual effects of the variables, path analysis allowed testing of the entire model at one time in order to provide better information about how well the data fits to the proposed model. Path analysis is considered a special case of structural equation modeling where the factors are comprised of one score instead of many items. Path analysis is appropriate to describe the directional relationship among a set of variables. The SSI software LISREL 8.80 was used to conduct the path analysis. The analysis provided a set of fit indices that indicated how well the data collected fits the proposed model. The path analysis also provided path coefficients, similar to beta weights, which indicated the strength of the path between any two factors as well as whether that path was significant in the model. Any demographics that were found to be significantly related to either a majority of the predictors or the outcome of intention were considered for inclusion into the primary analysis in order to control for the effects of that variable.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

Introduction

This chapter is divided into two major sections: the Preliminary Analysis section and the Primary Analysis section. The Preliminary Analysis section includes the descriptive statistics of the demographic items and the bivariate relationships among these items. The Primary Analysis section includes the results of the hypothesis testing using linear regression techniques and then includes the descriptions of whether the data fit the proposed model using path analysis in the statistical program LISREL 8.8. The alpha level for this study was set at $\alpha = .05$. Any findings with *p*-values greater than .05 are presented as non-significant. SPSS version 19 was used for all preliminary analyses.

Descriptive Statistics

The study was conducted among the forensics working for the DFPL in Turkish National Police (TNP) officers. A total of 625questionnaires were distributed to the forensics who works for the Forensic Police Laboratories in 10 regions. Out of 625 subjects, 543 returned the questionnaires. After eliminating the missing data, 536 of them remained for data analysis, which represented a %85.76 response rate. This response rate is significantly high when the limited number of study population is taken under consideration.

The study includes five control variables namely: gender, education level, location of post, rank or contract type, and role in a forensic investigation. The control variables are expected to understand the respondents' position in the organizational structure and their demographic characteristics.

Preliminary Analysis

The frequencies and percentages for the categorical demographic variables are displayed in Table 2. Categorical variables studied were gender, education, location of post, rank, and role. There were a total of 536 participants in this study. Most participants were male (87.5%), and 12.5% of participants were female. Most participants earned bachelor degrees (65.1%), 16.6% earned associate degrees, 13.4% earned graduate degrees, and a small minority only had high school diplomas (4.9%). About 22.0% of participants were located in Istanbul, and the rest were distributed according to the following: 15.3% in Diyarbakir, 10.3% in Bursa, 9.5% in Erzurum, 8.0% in Ankara, 8.8% in Izmir, 8.2% in Adana, 7.0% in Samsun, 5.8% in Antalya, and 4.9% in Kayseri.

Table 2

Frequencies and Percentages for the Categorical Demographic Variables

	n	**%**
Gender		
Male	469	87.5
Female	67	12.5
Education		
High School Diploma	26	4.9
Associate Degree	89	16.6
Bachelor Degree	349	65.1
Graduate Degree	72	13.4
Location of Post		
Istanbul	118	22.0
Ankara	43	8.0
Izmir	47	8.8
Diyarbakir	82	15.3
Adana	44	8.2
Erzurum	51	9.5
Bursa	55	10.3
Samsun	39	7.3
Antalya	31	5.8
Kayseri	26	4.9

(table continues)

Table 2 *(continued)*

	n	%
Rank		
Constable	446	83.2
Commissioned Officer	37	6.9
Senior Officer	38	7.1
Civilian Officer	15	2.8
Role		
Expert	105	19.6
Assistant	139	25.9
Technician	292	54.5

Participants were divided into 4 categories of rank: constable, commissioned officer, senior officer, and civilian officer. Most participants were constables (83.2%). The rest were distributed as follow: 7.1% were senior officers, 6.9% were commissioned officers, and 2.8% were civilian officers. Finally, the majority of the participating officers occupied specific roles in the forensic branches, namely technicians (54.5%), assistants (25.9%), and experts (19.6%).

Each construct was measure on a scale from 1.00 to 5.00 with 1.00 being *totally disagree* and 5.00 being *totally agree*. For perceived organizational justice, answers ranged from 1.00 to 5.00 with a mean score of 3.45 (*SD* = .90; see Table 3). Perceived organizational justice was further divided into three subscores including procedural justice, interactional justice, and distributive justice, which each ranged from 1.00 to 5.00 on the same scale. The mean score for procedural justice was 3.31 (*SD* = 1.04). The mean score for interactional justice was 3.83 (*SD* = .91), and for distributive justice, the mean score was 3.22 (*SD* = 1.02). For attitudes toward knowledge sharing, responses ranged from 1.80 to 5.00 on the same scale with a mean score of 4.07 (*SD* = .62). For subjective norm, the scores fell within the range of 1.40 to 5.00 on the same scale with a mean score of 3.82 (*SD* = .64).

Answers to questions about organizational citizenship behavior were measured on the

same scale and ranged from 2.13 to 5.00 with a mean score of 4.20 (*SD* = .43). Organizational citizenship behavior was further divided into five sub scores including altruism, courtesy, civic virtue, sportsmanship, and conscientiousness. Responses to questions about altruism ranged from 1.80 to 5.00 with a mean score of 4.21 (*SD* = .57).

Table 3

Means and Standard Deviations for Perceived Organizational Justice and its Dimensions, Attitudes toward Knowledge Sharing, Subjective Norm, Organizational Citizenship Behavior and its Dimensions, and Intention to Share Knowledge

	N	***M***	***SD***		**Min**	**Max**	
Perceived Organizational Justice	536	3.45	.90		1.00	5.00	
Procedural Justice	536	3.31	1.04		1.00	5.00	
Interactional Justice	536	3.83	.91		1.00	5.00	
Distributive Justice	536	3.22	1.02		1.00	5.00	
Attitudes Toward Knowledge Sharing	536	4.07	.62		1.80	5.00	
Subjective Norm	536	3.82	.64		1.40	5.00	
Organizational Citizenship Behavior	536	4.20	.43		2.13	5.00	
Altruism	536	4.21	.57		1.80	5.00	
Courtesy	536	4.38	.50		2.00	5.00	
Civic Virtue	536	4.07	.58		2.25	5.00	
Sportsmanship	536	4.09	.71		1.00	5.00	
Conscientiousness	536	4.23	.59		2.00	5.00	
Intention to Share Knowledge	536	4.01	.74		1.00	5.00	

The scores for courtesy fell between 2.00 and 5.00 with a mean score of 4.38 (*SD* = .50). For civic virtue, scores fell between 2.25 and 5.00 with a mean score of 4.07 (*SD* = .58). For sportsmanship, scores ranged from 1.00 to 5.00 with a mean score of 4.09 (*SD* = .71). Participants' scores for conscientiousness were within the range of 2.00 to 5.00 with a mean

score of 4.23 (*SD* = .59). Finally, scores for the construct intention to share knowledge ranged from 1.00 to 5.00 with a mean score of 4.01 (*SD* = .74).

Cronbach's alphas (α) were conducted to determine the inter-item reliability of each of the constructs. As seen in Table 4, each of the constructs demonstrated adequate reliability (α > .70). The score for perceived organization justice demonstrated strong inter-item reliability with an α score of .937.

Table 4

Cronbach's Alpha Coefficients for Perceived Organizational Justiceand its Dimensions, Attitudes toward Knowledge Sharing, Subjective Norm, Organizational Citizenship Behaviorand its Dimensions, and Intention to Share Knowledge

	Cronbach's α
Perceived Organization Justice	.937
Procedural Justice	.959
Interactional Justice	.920
Distributive Justice	.944
Attitudes Toward Knowledge Sharing	.920
Subjective Norm	.789
Organizational Citizenship Behavior	.759
Altruism	.905
Courtesy	.867
Civic Virtue	.883
Sportsmanship	.813
Conscientiousness	.776
Intention to Share Knowledge	.833

Similarly, the α scores for procedural justice, interactional justice, distributive justice, attitudes toward knowledge sharing, and altruism were all above .90 (α = .959, .920, .944, .920, and .905 respectively). The inter-item reliabilities for courtesy, civic virtue, sportsmanship, and

intention to share knowledge were also strong with α scores greater than .80 (α = .867, .883, .813, and .833, respectively). Finally, adequate reliability of α > .70 was shown for subjective norm (α = .789), organizational citizenship behavior (α = .759), and conscientiousness (α = .776).

A cross tabulation with Pearson's chi square (χ^2) and Cramer's *V* was conducted to test the relationship between the roles of the participants and their levels of education (see Table 5). Results revealed a significant relationship between role and education, χ^2 (4) = 143.70, $p < .001$, $V = .366$. A greater proportion of participants who obtained graduate degrees (52.8%) were experts compared to participants who obtained either bachelor degrees (18.9%) or high school/associate degrees (.9%). A greater proportion of participants who obtained bachelor degrees were assistants compared to participants who obtained graduate degrees (23.6%) or high school/associate degrees (3.5%). Finally, a greater proportion of technicians had obtained high school/associate degrees (95.7%) compared to technicians who obtained either bachelor degrees (47.3%) or graduate degrees (23.6%).

Table 5

Frequencies and Percentages for Education by Role

	Education							
	High School/ Associate Degree		Bachelor Degree		Graduate Degree			
	n	%	*n*	%	*n*	%	χ^2	*p*
Role							143.70	<.001
Expert	1	.9	66	18.9	38	52.8		
Assistant	4	3.5	118	33.8	17	23.6		
Technician	110	95.7	165	47.3	17	23.6		

The relationships among the independent variables were tested with Pearson's product–moment correlations. As shown in Table 6, results revealed a significant correlation, and all

scores are in a positive direction. Overall, Table 6 shows sub scores that range from fairly weak to strong. It may be expected that the sub scores of an overall score will be highly correlated, which is true in Table 6.

Table 6

Pearson's Product–Moment Correlations among Perceived Organizational Justiceand its Dimensions, Attitudes toward Knowledge Sharing, Subjective Norm, Organizational Citizenship Behaviorand its Dimensions

		1		2		3		4		5			
1.	Perceived Organizational Justice												
2.	Procedural Justice	.909	**										
3.	Interactional Justice	.888	**	.701	**								
4.	Distributive Justice	.918	**	.753	**	.735	**						
5.	Attitudes Toward Knowledge Sharing	.276	**	.214	**	.292	**	.251	**				
6.	Subjective Norm	.452	**	.396	**	.429	**	.406	**	.511	**		

		6		7		8		9		10		11	
7.	Organizational Citizenship Behavior	.474	**										
8.	Altruism	.441	**	.784	**								
9.	Courtesy	.475	**	.835	**	.668	**						
10.	Civic Virtue	.462	**	.748	**	.574	**	.607	**				
11.	Sportsmanship	.176	**	.595	**	.240	**	.334	**	.214	**		
12.	Conscientiousness	.251	**	.726	**	.470	**	.544	**	.503	**	.189	**

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

Tables 7 through 10 present the relationships among the demographic and independent variables. Initially gender was included in the series of analyses. However, no differences by gender were found. This may, however, be due to the very unequal distribution of males and females and not because men and women did not differ on the measures of interest. A series of one-way analyses of variance (ANOVAs) were conducted to determine whether there were

differences among the three roles for the constructs of perceived organizational justice, attitudes toward knowledge sharing, subjective norm, or organizational citizenship behavior (see Table 7).

Table 7

Means and Standard Deviations of Perceived Organizational Justice, Attitudes toward Knowledge Sharing, Subjective Norm, and Organizational Citizenship Behavior by Role

	n	*M*	*SD*	*F*	*p*
Perceived Organizational Justice				5.74	.003
Expert	105	3.70 [a]	.80		
Assistant	139	3.32 [b]	.98		
Technician	292	3.43 [b]	.87		
Attitudes Toward Knowledge Sharing				1.06	.349
Expert	105	4.14	.62		
Assistant	139	4.02	.66		
Technician	292	4.07	.61		
Subjective Norm				1.36	.257
Expert	105	3.88	.60		
Assistant	139	3.75	.70		
Technician	292	3.83	.63		
Organizational Citizenship Behavior				1.29	.277
Expert	105	4.15	.47		
Assistant	139	4.24	.43		
Technician	292	4.20	.41		

Note. Means with different superscripts differ significantly, $p < .05$.

Results revealed significant differences in perceived organizational justice scores based on participants' roles, F (2, 533) = 5.74, $p < .005$. Specifically, experts had higher scores for perceived organizational justice (M = 3.70, SD = .80) than did assistants (M = 3.32, SD = .98) or technicians (M = 3.43, SD = .87). There was not a significant difference in perceived organizational justice between technicians and assistants. In addition, there was not a significant

difference among roles for either attitudes toward knowledge sharing, subjective norm, or organizational citizenship behavior (all $p > .05$).

A multivariate analysis of variance (MANOVA) was conducted to determine whether there were significant differences by role among the three sub scores of perceived organizational justice and revealed a significant multivariate effect, F (6, 1060) = 4.00, p = .001, partial η^2 = .022. For the univariate ANOVAs, results revealed differences by role for each of the following sub scores: procedural justice, F (2, 533) = 7.61, p = .001; interactional justice, F (2, 533) = 4.56, p = .001; and distributive justice, F (2, 533) = 3.37, p = .001. For procedural justice, experts (M = 3.66, SD = .98) had significantly higher mean scores than did assistants (M = 3.18, SD = 1.10) and technicians (M = 3.25, SD = 1.01).

Table 8

Means and Standard Deviations of Procedural Justice, Interactional Justice, and Distributive Justice by Role

	n	*M*	*SD*	*F*	*p*
Procedural Justice				7.61	.001
Expert	105	3.66 [a]	.98		
Assistant	139	3.18 [b]	1.10		
Technician	292	3.25 [b]	1.01		
Interactional Justice				4.56	.011
Expert	105	4.06 [a]	.74		
Assistant	139	3.72 [b]	.98		
Technician	292	3.80 [b]	.93		
Distributive Justice				3.37	.035
Expert	105	3.38 [a]	.95		
Assistant	139	3.05 [b]	1.11		
Technician	292	3.25 [ab]	.99		

Note. Multivariate F (6, 1060) = 4.00, p = .001, partial η^2 = .022. Means with different superscripts differ significantly, $p < .05$.

There was not a significant difference for procedural justice between technicians and assistants. Similarly, experts (M = 4.06, SD = .74) had significantly higher mean scores for

interactional justice than did assistants (*M* = 3.72, *SD* = .98) and technicians (*M* = 3.80, *SD* = .93). There was not a significant difference in procedural justice between technicians and assistants. For distributive justice, experts (*M* = 3.38, *SD* = .95) had higher mean scores than did assistants (*M* = 3.05, *SD* = 1.11). The scores for distributive justice for technicians were not significantly different from the scores for either experts or assistants (*M* = 3.25, *SD* = .99). A MANOVA was also conducted to test for differences by role among the five sub scores of organizational citizenship behavior. Results revealed that neither the multivariate *F* nor any of the sub score ANOVAs were significant (all *p*> .05).

As shown in Table 9, an ANOVA was conducted to determine whether there were differences among the three levels of education for the constructs of perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior. Results revealed significant differences in the perceived organizational justice scores based on participants' levels of education, F (2, 533) = 3.65, p = .027. Specifically, participants with graduate degrees had significantly higher scores for perceived organizational justice (M = 3.68, SD = .94) than did participants with high school/associate degrees (M = 3.31, SD = .89). There was not a significant difference in perceived organizational justice between participants with graduate degrees and bachelor degrees (*M* = 3.46, *SD* = .89). Similarly, there was not a significant difference in perceived organizational justice between participants with bachelor degrees and high school/associate degrees. In addition there was not a significant difference among the levels of education for attitudes toward knowledge sharing, subjective norm, or organizational citizenship behavior (all *p*> .05).

Table 9

Means and Standard Deviations of Perceived Organizational Justice, Attitudes toward Knowledge Sharing, Subjective Norm, and Organizational Citizenship Behavior by Education

	n	*M*	*SD*	*F*	*p*
Perceived Organizational Justice				3.65	.027
High School/Associate Degree	115	3.31 [a]	.89		
Bachelor Degree	349	3.46 [ab]	.89		
Graduate Degree	72	3.68 [b]	.94		
Attitudes Toward Knowledge Sharing				.82	.440
High School/Associate Degree	115	4.05	.62		
Bachelor Degree	349	4.06	.63		
Graduate Degree	72	4.16	.62		
Subjective Norm				.82	.441
High School/Associate Degree	115	3.83	.58		
Bachelor Degree	349	3.79	.66		
Graduate Degree	72	3.90	.65		
Organizational Citizenship Behavior				.07	.932
High School/Associate Degree	115	4.20	.39		
Bachelor Degree	349	4.20	.43		
Graduate Degree	72	4.22	.47		

Note. Means with different superscripts differ significantly, $p < .05$.

As shown in Table 10, a MANOVA was conducted to determine whether there were significant differences by level of education among the three sub scores of perceived organizational justice. Results revealed a significant multivariate effect, F (6, 1060) = 2.34, p = .030, partial η2 = .013. For univariate ANOVAs, results revealed differences by level of education among the following subscores: procedural justice, F (2, 533) = 3.95, p = .020; and interactional justice, F (2, 533), p = .017. For procedural justice, participants with graduate degrees (M = 3.54, SD = 1.07) had significantly higher scores than did participants with high

school/associate degrees (M = 3.11, SD = 1.04). There was not a significant difference in procedural justice between participants with graduate degrees and bachelor degrees (M = 3.33, SD = 1.03).

Table 10

Means and Standard Deviations of Procedural Justice, Interactional Justice, and Distributive Justice by Education

	n	*M*	*SD*	*F*	*p*
Procedural Justice				3.95	.020
High School/Associate Degree	115	3.11	1.04		
Bachelor Degree	349	3.33	1.03		
Graduate Degree	72	3.54	1.07		
Interactional Justice				4.08	.017
High School/Associate Degree	115	3.67	.92		
Bachelor Degree	349	3.84	.91		
Graduate Degree	72	4.06	.90		
Distributive Justice				1.81	.164
High School/Associate Degree	115	3.16	.97		
Bachelor Degree	349	3.20	1.02		
Graduate Degree	72	3.43	1.08		

Note. Multivariate F (6, 1060) = 2.34, p = .030, partial η^2 = .013. Means with different superscripts differ significantly, p< .05.

In addition, there was not a significant difference in procedural justice between participants with bachelor degree and high school/associate degrees. Similarly, participants with graduate degrees (M = 4.06, SD = .90) had significantly higher scores for interactional justice than did participants with high school/associate degrees (M = 3.67, SD = .92). There was not a significant difference for interactional justice between participants with graduate degrees and bachelor degrees (M = 3.84, SD = .91). In addition, there was not a significant difference for

interactional justice between participants with bachelor degrees and high school/associate degrees. There was no difference in distributive justice among education levels ($p < .05$). A MANOVA was also conducted to test for differences by education level among the five subscores of organizational citizenship behavior. Neither the multivariate F nor any of the subscores ANOVAs were significant (all $p > .05$).

The relationships between the dependent variable and each of the demographics were tested using two one-way ANOVAs. There was no difference among roles for intention to share knowledge. In addition, there were no differences among education levels for intention to share knowledge (all $p < .05$).

Table 11

Pearson's Product–Moment Correlations among Perceived Organizational Justice and its Dimensions, Attitudes toward Knowledge Sharing, Subjective Norm, Organizational Citizenship Behavior and its Dimensions by Intention to Share Knowledge

	Intention to Share Knowledge
Perceived Organizational Justice	.508 **
Procedural Justice	.468 **
Interactional Justice	.492 **
Distributive Justice	.424 **
Attitudes Toward Knowledge Sharing	.400 **
Subjective Norm	.475 **
Organizational Citizenship Behavior	.506 **
Altruism	.374 **
Courtesy	.423 **
Civic Virtue	.479 **
Sportsmanship	.269 **
Conscientiousness	.349 **

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

The relationships between the dependent variable and each of the independent variables were tested using Pearson's product–moment correlations. As shown in Table 11, the majority of the sub scores demonstrate a moderately strong correlation with intention to share knowledge. The constructs perceived organizational justice and organizational citizenship behavior have the strongest sub scores in correlation with intention to share knowledge.

Primary Analysis

The Primary Analysis section includes the results of the hypothesis testing using linear regression techniques and then includes the descriptions of whether the data fit the proposed model using path analysis in the statistical program LISREL 8.8. Thus, the Primary Analysis section is divided into two subsections: Regression Analysis and Path Analysis.

Regression Analysis

The first research question, including its four hypotheses, was tested using two multiple linear regression analyses.

RQ_1: How do perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior influence intention to share knowledge?

H_{01}: The greater the extent to which perceived organizational justice is toward being conducive to knowledge sharing, the greater the intention to share knowledge will be.

H_{02}: The more favorable the attitudes toward knowledge sharing are, the greater the intention to share knowledge will be.

H_{03}: The greater the subjective norm is toward knowledge sharing, the greater the intention to share knowledge will be.

H_{04}: The stronger the organizational citizenship behavior is, the greater the intention to share knowledge will be.

The first regression for this research question included the overall scores for perceived organizational justice and organizational citizenship behaviors along with the scores for intention to share knowledge and subjective norm. The second regression for this research question included the sub scores for perceived organizational justice and organizational citizenship behaviors in place of the overall scores along with the scores for intention to share knowledge and subjective norm.

The first multiple linear regression analysis was conducted to predict intention to share knowledge based on perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior while controlling for education and role (see Table 12). Education and role were found to be significantly related to the other independent variables in the preliminary analyses, so they need to be included in the model to control for their effects. The overall model was significant (F (8, 527) = 49.04, $p < .001$) and accounted for 41.8% of the variance.

In controlling for education and role, results revealed that higher scores for perceived organizational justice were significantly associated with higher scores for intention to share knowledge (beta = .333, $p < .001$). Higher scores for attitudes toward knowledge sharing were associated with increased intention to share knowledge (beta = .105, $p = .010$). Higher scores for both subjective norm (beta =.139, $p = .001$) and organizational citizenship behavior were associated with increased intention to share knowledge (beta =.288, $p < .001$). In addition, it was found that having a graduate degree was associated with lower scores for intention to share knowledge (beta = -.118, $p = .008$).

Table 12

Summary of Multiple Linear Regression Predicting Intention to Share Knowledge From Perceived Organizational Justice, Attitudes Toward Knowledge Sharing, Subjective Norm, Organizational Citizenship Behavior, Education, and Role

	Unstandardized				
	β	*SE*	*Beta*	*t*	*p*
Perceived Organizational Justice	.273	.03	.333	8.80	<.001
Attitudes Toward Knowledge Sharing	.124	.05	.105	2.59	.010
Subjective Norm	.159	.05	.139	3.24	.001
Organizational Citizenship Behavior	.494	.07	.288	7.18	<.001
Bachelor Degree	-.074	.07	-.048	-1.12	.263
Graduate Degree	-.255	.10	-.118	-2.68	.008
Assistant	-.032	.08	-.019	-.41	.679
Technician	-.091	.07	-.062	-1.27	.204

Note. F (8, 527) = 49.04, $p < .001$, adj. $R^2 = .418$.

The second multiple linear regression conducted to test the first research question used the sub scores for perceived organizational justice and organizational citizenship behavior in place of the overall score. The predictors for this model included procedural justice, interactional justice, distributive justice, attitudes toward knowledge sharing, subjective norm, altruism, courtesy, civic virtue, sportsmanship, conscientiousness, education, and role. Again, education and role were included to control for their effects on the other predictors (see Table 13).

The overall model was significant—$F(14, 521) = 30.32$, $p < .001$—and accounted for 43.4% of the variance. In controlling for education and role, results revealed that for perceived organizational justice sub scores, higher scores for procedural justice (beta =.190, $p< .001$) and interactional justice (beta =.192, $p< .001$) were associated with increased intention to share knowledge. Higher scores for both attitudes toward knowledge sharing (beta =.116, $p = .004$) and subjective norm (beta =.132, $p = .004$) were also associated with increased intention to share

knowledge.

For organizational citizenship behavior sub scores, higher scores for civic virtue (beta =.212, p< .001) and conscientiousness (beta =.118, p = .004) were associated with increased intention to share knowledge. Higher scores for sportsmanship were only marginally associated with increased intention to share knowledge (beta = .063, p = .079). No association was found between intention to share knowledge and either distributive justice (beta = -.006, p = .910), altruism (beta = -.021, p = .656), or courtesy (beta = .008, p = .881). In addition, having a graduate degree was associated with lower intention to share knowledge (beta = -.126, p = .004).

Table 13

Summary of Multiple Linear Regression Predicting Intention to Share Knowledge From Procedural Justice, Interactional Justice, Distributive Justice, Attitudes Toward Knowledge Sharing, Subjective Norm, Altruism, Courtesy, Civic Virtue, Sportsmanship, Conscientiousness, Education, and Role

	Unstandardized				
	β	*SE*	*Beta*	*t*	*p*
Procedural Justice	.134	.04	.190	3.54	<.001
Interactional Justice	.155	.04	.192	3.61	<.001
Distributive Justice	-.005	.04	-.006	-.11	.910
Attitudes Toward Knowledge Sharing	.137	.05	.116	2.87	.004
Subjective Norm	.151	.05	.132	3.03	.003
Altruism	-.027	.06	-.021	-.45	.656
Courtesy	.011	.08	.008	.15	.881
Civic Virtue	.271	.06	.212	4.67	<.001
Sportsmanship	.065	.04	.063	1.76	.079
Conscientiousness	.148	.05	.118	2.90	.004
Bachelor Degree	-.084	.07	-.054	-1.28	.202
Graduate Degree	-.271	.10	-.126	-2.87	.004
Assistant	-.026	.08	-.016	-.35	.727
Technician	-.083	.07	-.056	-1.16	.248

Note. F (1, 521) = 30.32, p < .001, adj. R^2 = .434.

The second research question, including its two hypotheses, was tested using two multiple linear regression analyses.

RQ_2: How do perceived organizational justice and subjective norm influence attitudes toward knowledge sharing?

H_{01}: The greater the perceived organizational justice is, the more favorable the attitudes toward knowledge sharing will be.

H_{02}: The greater the subjective norm is toward knowledge sharing, the more favorable the attitudes toward knowledge sharing will be.

The first regression included the overall scores for perceived organizational justice along with the score for subjective norm. The second regression included the sub scores for perceived organizational justice along with the score for subjective norm.

Table 14

Summary of Multiple Linear Regression Predicting Attitudes Toward Knowledge Sharing From Perceived Organizational Justice, Subjective Norm, Education, and Role

	Unstandardized				
	β	***SE***	***Beta***	***t***	***p***
Perceived Organizational Justice	.036	.03	.052	1.22	.224
Subjective Norm	.470	.04	.485	11.59	<.001
Bachelor Degree	.027	.06	.021	.43	.670
Graduate Degree	.059	.09	.033	.65	.515
Assistant	-.032	.07	-.023	-.45	.654
Technician	-.015	.07	-.012	-.21	.831

Note. F (6, 529) = 31.69, $p < .001$, adj. $R^2 = .256$.

Table 14 displays the results from the first multiple linear regression analysis conducted to predict attitudes toward knowledge sharing based on perceived organizational justice and subjective norm while controlling for education and role. Education and role were shown to be

significantly related to the independent variables in the preliminary analyses and were therefore included in the model to control for their effects. The overall model was significant—$F(6, 529) = 31.69$, $p < .001$—and accounted for 25.6% of the total variance. In controlling for education and role, higher scores for attitudes toward knowledge sharing were significantly associated with the score for subjective norm (beta = .485, $p < .001$) but not with the overall scores for perceived organizational justice (beta = .052, $p = .224$).

The second multiple regression conducted to test the second research question included subscores in place of the overall score for perceived organizational justice. Predictors of the model included procedural justice, interactional justice, distributive justice, and subjective norm. Again, education and role were included to control for possible effects (see Table 15).

Table 15

Summary of Multiple Linear Regression Predicting Attitudes Toward Knowledge Sharing From Procedural Justice, Interactional Justice, Distributive Justice, Subjective Norm, Education, and Role

	Unstandardized				
	β	***SE***	***Beta***	***t***	***p***
Procedural Justice	-.055	.04	-.091	-1.50	.134
Interactional Justice	.082	.04	.120	2.03	.043
Distributive Justice	.020	.04	.033	.51	.610
Subjective Norm	.465	.04	.480	11.46	<.001
Bachelor Degree	.026	.06	.020	.42	.676
Graduate Degree	.053	.09	.029	.59	.558
Assistant	-.040	.07	-.028	-.55	.581
Technician	-.024	.07	-.020	-.36	.721

Note. F (8, 527) = 24.51, $p < .001$, adj. $R^2 = .260$.

The overall model was significant—$F(8, 527) = 24.51$, $p < .001$—and accounted for 26.0% of the total variance. In controlling for education and role, results indicate that both

interactional justice (beta = .120, p = .043) and subjective norm (beta = .480, p< .001) were significantly associated with higher scores for attitudes toward sharing knowledge. Procedural justice (beta = -.091, p = .134) and distributive justice (beta = .033, p = .610) were not associated with attitudes toward knowledge sharing.

The third research question, including its hypothesis, was tested using two multiple linear regression analyses.

RQ_3: How does perceived organizational justice influence subjective norm?

H_{01}: The greater the perceived organizational justice is, the greater the subjective norm to knowledge sharing will be.

The first regression included the overall scores for perceived organizational justice, and the second regression included the subscores for perceived organizational justice. The first multiple regression analysis was conducted to predict subjective norm scores based on overall scores for perceived organizational justice while controlling for education and role (see Table 16).

Table 16

Summary of Multiple Linear Regression Predicting Subjective Norm from Perceived Organizational Justice, Education, and Role

	Unstandardized				
	β	*SE*	*Beta*	*t*	*p*
Perceived Organizational Justice	.325	.03	.454	11.56	<.001
Bachelor Degree	-.069	.07	-.051	-1.02	.306
Graduate Degree	-.032	.10	-.017	-.33	.745
Assistant	-.001	.08	-.001	-.01	.989
Technician	.019	.07	.015	.26	.792

Note. F (5, 530) = 27.66, p < .001, adj. R^2 = .199.

Education and role were shown to be significantly related to subjective norm and were included to control for possible effects. The overall model was significant—$F(5, 530) = 27.66$, $p < .001$—and accounted for 19.9% of the total variance. In controlling for education and role, results indicate that higher scores for perceived organizational justice were significantly associated with higher scores for subjective norm (beta = .454, $p < .001$).

The second multiple regression conducted to test the third research question included the sub scores for perceived organizational justice. Predictors of the model included procedural justice, interactional justice, distributive justice, education, and role. Again, education and role were included to control for effects on the dependent variable (see Table 17).

Table 17

Summary of Multiple Linear Regression Predicting Subjective Norm From Procedural Justice, Interactional Justice, Distributive Justice, Education, and Role

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	Unstandardized				
	β	*SE*	*Beta*	*t*	*p*
Procedural Justice	.082	.04	.133	2.12	.035
Interactional Justice	.175	.04	.248	4.10	<.001
Distributive Justice	.077	.04	.122	1.85	.065
Bachelor Degree	-.073	.07	-.054	-1.08	.281
Graduate Degree	-.037	.10	-.020	-.38	.701
Assistant	-.002	.08	-.001	-.02	.982
Technician	.020	.07	.015	.27	.787

Note. F (7, 528) = 20.14, $p < .001$, adj. $R^2 = .200$.

The overall model was significant—$F(7, 528) = 20.14$, $p < .001$—and accounted for 20.0% of the total variance. In controlling for education and role, higher scores for both procedural justice (beta = .133, $p = .035$) and interactional justice (beta = .248, $p < .001$) were significantly associated with higher scores for subjective norm. Higher scores for distributive

justice were marginally associated with higher scores for subjective norm (beta = .122, p = .065).

The fourth research question, including its hypothesis, was tested using six multiple linear regression analyses.

RQ_4: How does perceived organizational justice influence organizational citizenship behavior?

H_{01}: The greater the perceived organizational justice is, the stronger the organizational citizenship behavior will be.

The first regression analysis included the overall scores for perceived organizational justice to predict the overall scores for organizational citizenship behavior. The following five regression analyses included the sub scores for perceived organizational justice to predict each of the five sub scores for organizational citizenship behavior (i.e., altruism, courtesy, civic virtue, sportsmanship, and conscientiousness).

The first multiple linear regression analysis was conducted to predict the overall scores for organizational citizenship behavior based on the overall scores for perceived organizational justice while controlling for education and role (see Table 18). Education and role were shown to be significantly related to the independent variables in the preliminary analyses and were therefore included to control for possible effects. The overall model was significant—$F(5, 530) = 13.73$, $p < .001$—and accounted for 10.6% of the total variance. In controlling for education and role, higher overall scores for perceived organizational justice were significantly associated with higher overall scores for organizational citizenship behavior (beta = .335, $p < .001$). In addition, it was found that being an assistant was associated with higher organizational citizenship behavior compared to being an expert (beta = .159, p = .005).

Table 18

Summary of Multiple Linear Regression Predicting Organizational Citizenship Behavior From Perceived Organizational Justice, Education, and Role

	Unstandardized				
	β	***SE***	***Beta***	***t***	***p***
Perceived Organizational Justice	.160	.02	.335	8.06	<.001
Bachelor Degree	-.027	.05	-.030	-.56	.578
Graduate Degree	-.003	.07	-.003	-.05	.963
Assistant	.155	.05	.159	2.85	.005
Technician	.093	.05	.109	1.81	.071

Note. F (5, 530) = 13.73, $p < .001$, adj. $R^2 = .106$.

The fourth research question was again tested using five multiple linear regression analyses to include the subscores of the variables in the analysis. The second regression analysis included subscores for perceived organizational justice to predict each of the five subscores for organizational citizenship behavior (i.e., altruism, courtesy, civic virtue, sportsmanship, and conscientiousness). Results revealed that all five regressions were significant (all $p< .01$); the beta values and regression summary statistics are shown in Table 19.

The percent of variance explained ranged from 2.7% for the model predicting conscientiousness to 9.7% for the model predicting courtesy. In examining the predictors, it was found that procedural justice was only a significant predictor of conscientiousness (beta = .143, $p< .05$), indicating that higher scores for procedural justice were associated with higher scores for conscientiousness. Interactional justice was a significant predictor for altruism, courtesy, civic virtue, and sportsmanship (beta = .218 to .365, all $p< .01$), indicating that higher scores for interactional justice were associated with higher scores for altruism, courtesy, civic virtue, and sportsmanship. Distributive justice was a significant predictor of courtesy only (beta = -.150,

p<.05), indicating that higher scores for distributive justice were associated with lower scores for courtesy. In addition, being an assistant or technician was associated with higher scores for many of the organizational citizenship behaviors compared to being an expert.

Table 19

Summary of Multiple Linear Regression Predicting Altruism, Courtesy, Civic Virtue, Sportsmanship, and Conscientiousness from Procedural Justice, Interactional Justice, Distributive Justice, Education, and Role

	Altruism	Courtesy	Civic Virtue	Sportsmanship	Conscientiousness
Procedural Justice	.118 +	.095	.084	.130 +	.143 *
Interactional Justice	.295 **	.365 **	.218 **	.264 **	.126 +
Distributive Justice	-.115	-.150 *	.026	-.112	-.089
Bachelor Degree	.021	-.055	-.018	-.074	-.019
Graduate Degree	.059	-.042	.053	-.056	-.030
Assistant	.110 +	.094 +	.138 *	.141 *	.120 *
Technician	.135 *	.053	.122 *	.030	.137 *
F	8.01 **	9.22 **	8.24 **	7.20 **	3.16 **
Adj. R^2	.084	.097	.087	.075	.027

Note. + p<.10, * p< .05, ** p< .01.

After each of the hypothesized relationships were tested using multiple linear regression, path analysis was conducted in the software LISREL 8.8 to identify whether the collected data fit the proposed model (see Figure 3 in Chapter 3). The model was tested in two ways. First, the model was tested using just the overall scores for each variable, which included perceived

organizational justice, organizational citizenship behavior, subjective norm, intention to share knowledge, and attitudes toward knowledge sharing. The fit of the data to this proposed model was not adequate, χ^2 (2) = 122.95, p< .001, RMSEA = .337. Therefore, the model was modified according to the fit indices provided by Lisrel. Additionally, the conceptual relationship among variables was also considered so that intention to share knowledge remained the outcome variable because the purpose of the study was to identify predictors of this outcome. The final model is shown in Figure 4 and is summarized in Table 19. This model achieved acceptable fit, χ^2 (1) = .23, p = .633, RMSEA < .001. A more detailed list of fit indices for this model and the second tested model discussed in the following paragraphs are presented in Table 20.

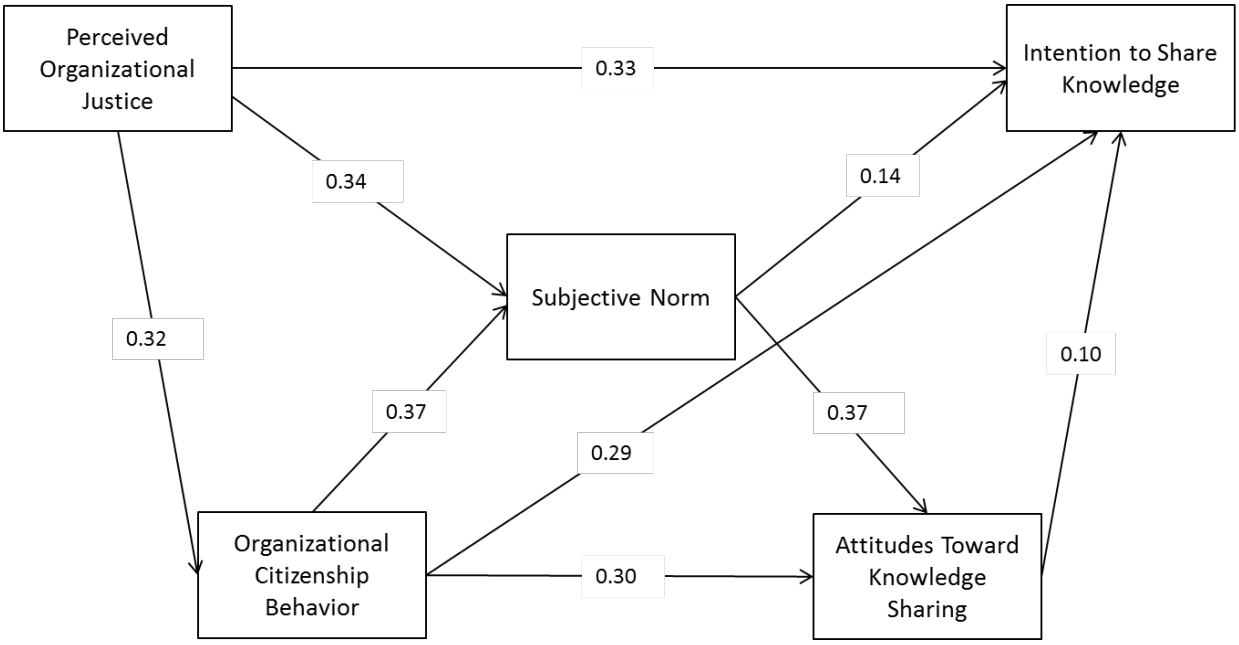

Figure 4. Final model with standardized path coefficients.

Table 20

Standardized Path Coefficients and t*-Values for Proposed Research Model With Overall Scores*

	Path Coefficient	***t*-value**	
Perceived Organization Justice			
Intention to Share Knowledge	.33	8.71	*
Subjective Norm	.34	8.96	*
Organizational Citizenship Behavior	.32	7.72	*
Organizational Citizenship Behavior			
Subjective Norm	.37	9.80	*
Intention to Share Knowledge	.29	7.28	*
Attitudes Toward Knowledge Sharing	.30	7.45	*
Subjective Norm			
Intention to Share Knowledge	.14	3.26	*
Attitudes Toward Knowledge Sharing	.37	9.17	*
Attitudes Toward Knowledge Sharing			
Intention to Share Knowledge	.10	2.52	*

In the final model, all paths were significant as indicated by *t*-values > 1.96, $p < .05$. Intention to share knowledge was directly predicted by each of the other constructs. In addition, organizational citizenship behavior was predicted by perceived organizational justice. Subjective norm was also predicted by perceived organizational justice and by organizational citizenship behavior. Finally, attitudes toward knowledge sharing were predicted by organizational citizenship behavior and subjective norm.

Next, the same proposed model was tested using the sub scores of perceived organizational justice and organizational citizenship behavior in place of the overall scores. The other variables of subjective norm, intention to share knowledge, and attitudes toward knowledge sharing remained the same. When this model was tested as it was proposed, the fit was not acceptable, χ^2 (20) = 1395.79, $p < .001$, RMSEA = .360. This result was not surprising because

the simple model in the first test did not show adequate fit either. Therefore, the second model was modified using the modification indices provided by Lisrel and the overall scores as a guide. A well-fitting model was found and is shown in Figure 5 and summarized in Table 21, χ^2 (17) = 37.93, p = .003, RMSEA = .048.

Table 21

Model Fit Indices for the Three-Factor and Attention/Working Memory (A/WM) Structural Regression (SR) Models

	Final Model	**Final Model (With Subscores)**
χ^2	.22	37.93
df	1	17
Adjusted χ^2	.22	2.23
***p*-value**	.633	.003
RMSEA	< .001	.048
RMSEA (CI)	(< .001, .090)	(.027, .069)
SRMR	.004	.040
CFI	1.00	.994

Note. Adjusted $\chi^2 = \chi^2$/df; RMSEA = root mean square error of approximation; CI = 90% confidence interval; SRMR = standardized root mean square residual; CFI = comparative fit index.

As previously mentioned, a detailed list of fit indices is shown in Table 20. Only one sub score (i.e., distributive justice) was eliminated from the model. In addition, the error covariances of several of the organizational citizenship behavior sub scores were allowed to correlate. These correlations are not shown in Figure 5 to make the figure more readable but are presented in Table 22.

Table 22

Standardized Path Coefficients and t*-Values for Proposed Research Model with Sub scores*

	Path Coefficient	***t*-value**	
Procedural Justice			
Intention to Share Knowledge	.19	4.09	*
Subjective Norm	.16	3.38	*
Conscientiousness	.11	3.00	*
Interactional Justice			
Intention to Share Knowledge	.19	4.02	*
Subjective Norm	.17	3.36	*
Sportsmanship	.23	5.60	*
Civic Virtue	.26	6.69	*
Altruism	.26	6.63	*
Courtesy	.28	7.41	*
Conscientiousness			
Intention to Share Knowledge	.13	3.40	*
Civic Virtue			
Subjective Norm	.19	4.17	*
Intention to Share Knowledge	.20	4.97	*
Altruism			
Subjective Norm	.12	2.48	*
Attitudes Toward Knowledge Sharing	.15	3.13	*
Courtesy			
Subjective Norm	.19	3.86	*
Attitudes Toward Knowledge Sharing	.17	3.51	*
Subjective Norm			
Intention to Share Knowledge	.13	3.03	*
Attitudes Toward Knowledge Sharing	.36	8.78	*
Attitudes Toward Knowledge Sharing			
Intention to Share Knowledge	.12	3.15	*

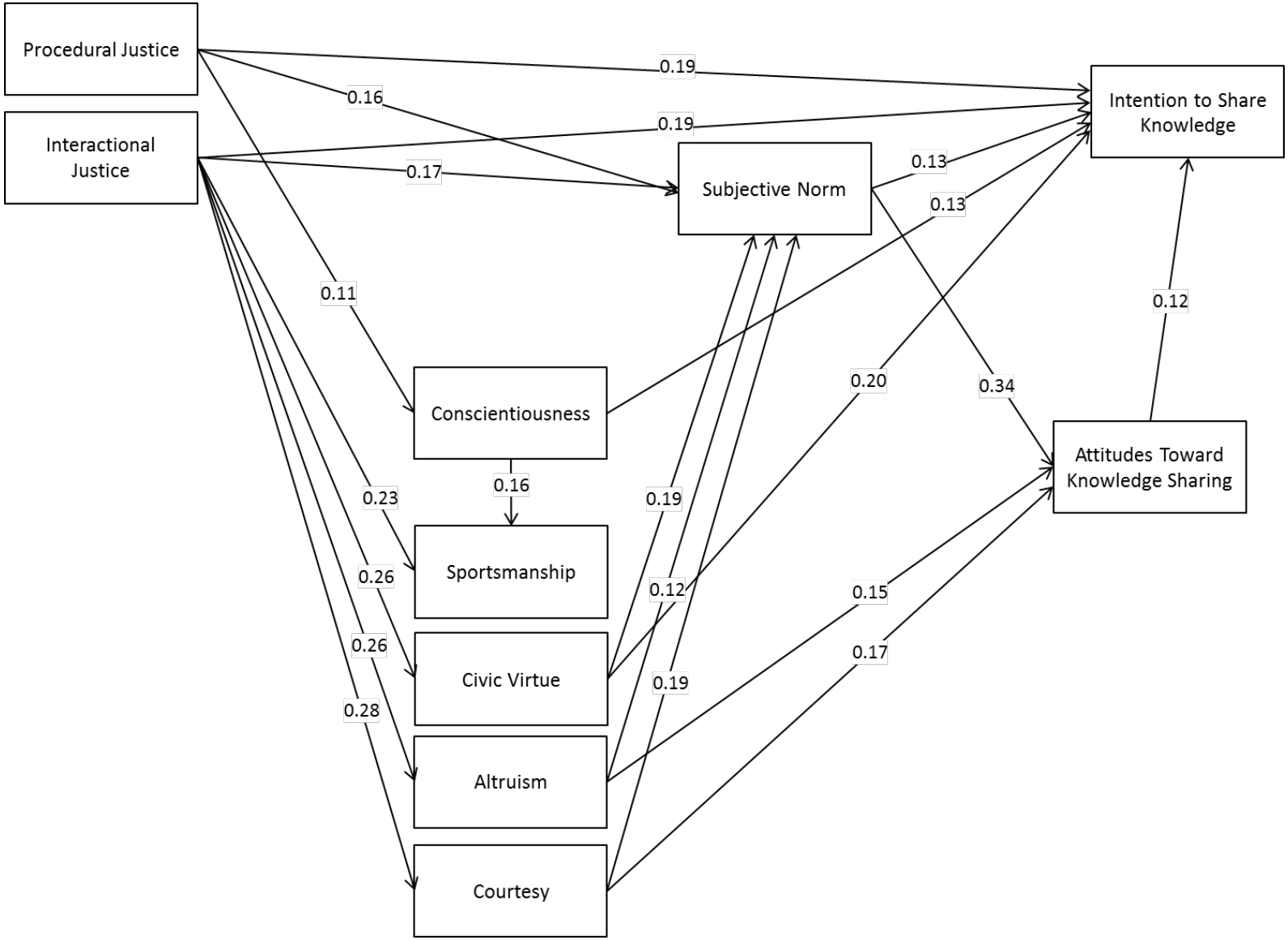

*Figure 5.*Final model using subscores with standardized path coefficients.

Table 23

Correlation Coefficients among Organizational Citizenship Behavior Sub scores

	Conscientiousness		**Sportsmanship**		**Civic Virtue**		**Altruism**	
	Path Coefficient	*t*-value	Path Coefficient	*t*-value	Path Coefficient	*t*-value	Path Coefficient	*t*-value
Sportsmanship	.16	3.74 *	—	—	—	—	—	—
Civic Virtue	.46	10.04 *	—	—	—	—	—	—
Altruism	.43	9.48 *	—	—	.50	10.91 *	—	—
Courtesy	.51	10.92 *	.13	4.45 *	.52	11.41 *	.58	12.32 *

In the final model using the sub scores, all the paths were significant as indicated by *t*-values > 1.96, $p < .05$. As shown in Figure 5, intention to share knowledge was predicted by all of the constructs except the organizational citizenship behavior sub scores of sportsmanship, altruism, and courtesy. The strongest predictors of intention to share knowledge were procedural justice, interactional justice, and civic virtue (Standardized Path Coefficient = .19 to .20). Attitudes toward knowledge sharing was most strongly predicted by subjective norm (Standardized Path Coefficient = .34) but was also predicted by altruism and courtesy. Subjective norm was predicted by civic virtue, altruism, courtesy, procedural justice, and interactional justice. Each of these path coefficients was approximately equal in magnitude (Standardized Path Coefficients = .12 to .19). Of the five organizational citizenship behavior sub scores, conscientiousness was predicted by procedural justice, and the other four (i.e., sportsmanship, civic virtue, altruism, and courtesy) were predicted by interactional justice. In addition, conscientiousness directly predicted sportsmanship, but sportsmanship did not predict any other constructs in the model.

Next, the models were examined in terms of the research questions and hypotheses. The following is the first research question with its corresponding hypotheses:

RQ_1: How do perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior influence intention to share knowledge?

H_{01}: The greater the extent to which perceived organizational justice is toward being conducive to knowledge sharing, the greater the intention to share knowledge will be.

H_{02}: The more favorable the attitudes toward knowledge sharing are, the greater the

intention to share knowledge will be.

H_{03}: The greater the subjective norm is toward knowledge sharing, the greater the intention to share knowledge will be.

H_{04}: The stronger the organizational citizenship behavior is, the greater the intention to share knowledge will be.

The models indicate that each of these constructs (i.e., perceived organizational justice, attitudes toward knowledge sharing, subjective norm, and organizational citizenship behavior) significantly and positively impact intention to share knowledge. In examining the subscores in the more detailed model, distributive justice was shown not to be related to the other model constructs. In addition, sportsmanship, altruism, and courtesy did not predict intention to share knowledge. However, procedural justice, interactional justice, conscientiousness, and civic virtue all did significantly impact intention to share knowledge.

The following is the second research question with its corresponding hypotheses:

RQ_2: How do perceived organizational justice and subjective norm influence attitudes toward knowledge sharing?

H_{01}: The greater the perceived organizational justice is, the more favorable the attitudes toward knowledge sharing will be.

H_{02}: The greater the subjective norm is toward knowledge sharing, the more favorable the attitudes toward knowledge sharing will be.

The models indicate that perceived organizational justice, either as an overall score or as individual subscores, did not directly predict attitudes toward knowledge sharing. However, subjective norm did positively impact attitudes toward knowledge sharing in both versions of the model. In fact, the path between subjective norm and attitudes toward knowledge sharing was the

strongest path in both models. It is also interesting to note that perceived organizational justice did significantly impact subjective norm in both models, meaning that perceived organizational justice indirectly affected attitudes toward knowledge sharing through subjective norm.

The following is the third research question with its corresponding hypothesis:

RQ_3: How does perceived organizational justice influence subjective norm?

H_{01}: The greater the perceived organizational justice is, the greater the subjective norm to knowledge sharing will be.

The models indicate that perceived organizations justice, either as an overall score or as individual sub scores, directly impacted subjective norm in a positive direction. However, the more detailed model shows that distributive justice was not included in the model and, as such, was not a significant predictor of subjective norm.

The following is the fourth research question with its corresponding hypothesis:

RQ_4: How does perceived organizational justice influence organizational citizenship behavior?

H_{01}: The greater the perceived organizational justice is, the stronger the organizational citizenship behavior will be.

The relationship between perceived organizational justice and organizational citizenship behavior is evident in both versions of the model. In considering the overall scores, organizational citizenship behavior was significantly predicted by perceived organizational justice in the positive direction. The detailed model provides more information about this relationship. Of the five organizational citizenship behavior subscores, only conscientiousness was predicted, in a positive direction, by procedural justice. The other four subscores of

organizational citizenship behavior (i.e., sportsmanship, civic virtue, altruism, and courtesy) were positively predicted by interactional justice.

CHAPTER 5

DISCUSSION

Introduction

This dissertationinvestigated the influence of perceived organizational justice (Perceived OJ), subjective norms, attitudes toward knowledge sharing (ATKS), and organizational citizenship behavior (OCB)on intention to knowledge sharing (IKS). This chapter presents a substantial discussion and a review of the findings detailed in previous chapter. Below is the discussion of the findings. In addition, the limitations and contribution of the research, implications, and recommendations for the future research are provided.

Descriptive Statistics

In this study, some of the antecedent factors influencing knowledge sharingare proposed through a model. The model (Figure 3)has been developed from the theory of reasoned action (TRA), and extended with antecedent factors that arose from earlier research. The first construct group investigated comes from Ajzen and Fishbein's (1975; 1980) TRA constructs. The second construct group emerged from earlier organizational justice and knowledge sharing research. In addition to these, the role of organizational citizenship and the role of demographic variables were investigated.

Straub (1989) suggests that instrument validation is important for reliability, which confirms accuracy of measurement. In this study, the Cronbach's alpha reliability coefficients (α) for perceived organizational justice total and organizational justice dimensions (procedural justice, interactional justice, and distributive justice) were .95, .92, .94, and.92 respectively. The results showed that all organizational justice dimensions were represented reliably by their associated items. The reliability results based onIbragimova's (2006) research supported this

with reliability scores (α) of organizational justice dimensions (procedural justice, interactional justice, and distributive justice) were .86, .82, and .90.

The Cronbach's alpha reliability coefficient (α) for forensics` intention to knowledge sharing, attitudes towards knowledge sharing, and subjective norms were .93, .78, and .75. These results indicated that the itemspresented in the questionnairefor these constructswere reliable. Ibragimova (2006) reported that the reliability score for the same constructs were .85, .75, and .79 which were also consistent with the results. Moreover, the Crombach alpha reliability coefficient (α)comparing the total OCBs with each of the OCB dimensions (altruism, courtesy, civic virtue, sportsmanship, and conscientiousness) were reported .90, .86, .88, .81, .77, and 83 respectively. Supportively, Podsakof and colleagues' (1990) research, from which the same constructs and items were originally adopted,were reported with a .70 alpha values.

Participants responded to the questionnaire along the following criteria: 1 = *totallydisagree*; 2 = *disagree*; 3 =*neutral*; 4 =*agree*; and 5 =*totallyagree*. The mean (M) scores for all perceived organizational justice dimensions (procedural justice, interactional justice, and distributive justice), attitude towards knowledge sharing, subjective norm, OCB dimensions (altruism, courtesy, civic virtue, sportsmanship, and conscientiousness), and intention to share knowledge were 3.31, 3.83, 3.22, 4.06, 3.81, 4.21, 4.37, 4.06, 4.08, 4.23, and 4.00 respectively.

Table 24

Relationships among Constructs

	Perceived OJ		**ATKS**		**Subjective Norm**		**OCB**		**IKS**	
Perceived OJ	Positive	Strong	Positive	Moderate	Positive	Moderate	Positive	Weak to Moderate	Positive	Moderate
ATKS	Positive	Moderate	Positive	Moderate	Positive	Moderate	Positive	Moderate	Positive	Moderate
Subjective Norm	Positive	Weak to Moderate	Positive	Weak to Moderate	Positive	Weak to Moderate	Positive	Weak to Moderate	Positive	Moderate
OCB	Positive	Weak to Moderate	Positive	Moderate	Positive	Weak to Moderate	Positive	Weak to Moderate	Positive	Moderate
IKS	Positive	Moderate	Positive	Moderate	Positive	Moderate	Positive	Moderate	Positive	Moderate

Relationships with Intension to Share Knowledge

The social sciences define general fairness as organizational justicein organizational settings. Recent research (e.g. Ibragimova, 2006; George & Jones, 2007; Crow et al., 2011) emphasizes that organizational justice is significantly related to employee behavior, motivation, productivity, and employee's dedication. Even though some authors classify it slightly different, in general, organizational justice can be categorized in three dimensions – namely, distributive justice, procedural justice, and interactional justice.

Existence of equity or inequity is evaluated by expected outcomes versus received outcomes. Folger and Konovsky (1989) argue that reactions to distributive justice are outcome oriented rather than toward organizational purposes. Procedural justice transactions between an organization and its members are expected to be ethical, precise, and reliable (Konovsky and Cropanzano, 1991). Research suggests that socio-economic factors foster human relations.

According to social bonding and the psychological contract view, individuals believe that organizations and employees are mutually obliged to contribute not only tangible outcomes but intangible outcomes as well (Ibragimova, 2006).

Intention to share knowledge is an individual behavior that is defined as willingnessto share one's knowledge with an organization through its repositories or members (Bock et al., 2005). Effective knowledge sharing is possible when the involved parties believe that outcomes are distributed fairly and procedures to performance evaluation are conducted justly. Moreover, organizational relationships also encourage employees to share their knowledge with the organization (Ibragimova, 2006). To answer the first research question, "How do perceived organizational justice, attitudes toward knowledge sharing, subjective norms, and organizational citizenship behavior influence intention to share knowledge?" four hypotheses were developed(Figure 3.H1, H5, H6, and H7) developed.

The first hypothesis (Figure 3.H1) examined the relationship between perceived organizational justice and intention to share knowledge. This hypothesis suggested that more positive organizational justice perceptions would promote greater knowledge sharing intentions. Analysis of the data supported this assumption (beta .333). When looking at sub scores, it was revealed that procedural justice and interactional justice predicted intention to share knowledge but not distributive justice. Thus, it supports Ibragimova's (2006) research. This result highlights that knowledge sharing contributions and efforts can both be reflected to outcomes independently and encourage knowledge sharing. Even though the performance evaluation is fair, employees would engage more in knowledge sharing activities if they see distinct positive outcomes because of knowledge sharing.

Along with subjective norms, attitudes toward knowledge sharing are expressed as one of the principal determinants of one's intentions (Ajzen and Fishbein, 1980). In terms of TRA, attitudes toward knowledge sharing refer to the level of affirmative feelings a person has, which then determines their intentions. In this study, attitudes toward knowledge sharing are discussed as confirmatory or adverse engagements in sharing knowledge of forensics within the TNP. Furthermore, subjective norms are constructed on two dimensions: normative beliefs and motivation to comply. Constant et al. (1994) emphasized that knowledge sharing is increases if members consider it a socially expected behavior in work environment.

The second hypothesis for this research question (Figure 3.H5) examined the relationship between attitudes toward knowledge sharing and intention to share knowledge. As hypothesized, the data analysis found that there was a significant, positive relationship (beta= .105) between attitudes and intention to share knowledge; the more favorable is the attitudes toward knowledge sharing, the greater is the intention to share knowledge. Similar to Bock et all's (2005) and Ibragimova's (2006) studies, this research also stressed that attitudes had a positive influence on knowledge sharing intentions. Thus, the finding is consistent with the theory and previous research.

Subjective norms were mentioned as another determinant of intentions. The third hypothesis of the research question, H6 (Figure 3.), was tested to examine the relationship between subjective norms and intention to share knowledge. The hypothesis states that subjective norms have a positive effect on intention. Like the earlier research (e.g. Bock et al., 2005; Ibragimova, 2006; Cakar, 2011) and theory, the analysis revealed that the relationship is significant and positive, supporting the hypothesis.

As a motivating factor for a public servant, competition with fellow workers is not apparent all the time due to the nature of service. For instance, law enforcement workers exhibit peer and agency oriented behaviors as part of their subcultural norms. Conversely, in a business environment employees compete and by demonstrating achievement oriented behavior because outcomes convert responsively to individual gain. Thus, higher employee performance and productivity could be observed as a byproduct of competition. On the other hand, organizational citizenship behavior (OCB) is defined as work ethics and qualities that are beyond job description. Organ (1988) categorized OCB into 5 aspects: altruism, courtesy, civic virtue, sportsmanship, and conscientiousness. Although OCBs are highly influential on performance and satisfaction at work, they are difficult to acknowledge with standard reward systems (Organ, 1988).

The fourth hypotheses (Figure 3.H7) investigated the relationship between OCBs and intention to share knowledge. Like the earlier research (e.g. Aliei et al., 2011; Al Zu'bi, 2011), data analysis revealed that stronger organizational citizenship behavior would lead to greater intention to share knowledge (beta= .288). When looking at subscores, it was observed that civic virtue and conscientiousness predicted intention to share knowledge but not altruism, courtesy, or sportsmanship. The results with sub scores highlighted that loyalty to the organization and respect to the organizational rules are significantly higher than the rest of the OCBs among the forensics in the TNP.

The overall model associated with the first research question was found to be significant with an adjusted (R^2=.418). Moreover, in terms of demographic variables, having a high school or associate degree predicted a higher intention to share knowledge compared to having a graduate degree. All results were controlled for education and role.

Relationships among Exogenous (Independent) Variables

Bock et al. (2005) posit that the roles of anticipated extrinsic rewards, reciprocal relationships, sense of self-worth, and subjective norms should be observed to explain attitudes toward knowledge sharing. Ibragimova (2006) stresses organizational justice perception as antecedent to intention to knowledge sharing. In addition, the relationship between organizational justice perception and attitude toward knowledge sharing were investigated (Ibragimova, 2006).

To answer the second research question, "How do perceived organizational justice and subjective norm influence attitudes toward knowledge sharing?" two hypotheses (Figure 3.H2 and H8) were developed based on the third research question; how does an individual's perceived organizational justice influence his or her subjective norm? The corresponding hypothesis is in Figure 3.H3.

Ibragimova (2006) emphasizes that perceived interactional justice predicts attitudes toward knowledge sharing but not perceived procedural justice or perceived distributive justice. Hypothesis 2(Figure 3) examined the relationships between perceived organizational justice and attitudes toward knowledge sharingfinding that the greater the former is, the more favorable the latter will be. Like Ibragimova's findings, this data analysis showed that the hypothesis was not supported (beta = .052). Testing the hypothesis with subscores revealed that only interactional justice predicted intention to share knowledge partially supporting the hyphotesis

Ajzen and Fishbein (1980) refer to subjective norms as the importance of expectation that is associated with those who surround an individual in the work environment. Therefore, attitudes toward knowledge sharing are shaped by the people that we work with. The second hypothesis(Figure 3.H8) examined the relationship between subjective norms to knowledge

sharing and attitudes toward knowledge sharing. Similar to Bock et al.'s (2005) and Ibragimova's (2006) findings, the results showed that the hypothesis was supported (beta =.485).

Bock et al. (2006) argued that there is a significant association between sense of self-worth and subjective norms in the hypothesized direction. In addition, sense of self-worth influences attitudes toward knowledge sharing through subjective norms. Likewise, the results examining H3 showed that there was a positive and moderate relation between perceived organizational justice and subjective norms. This result highlights that forensics have positive feelings from the existing justice in the work place and in fellow employees' expectations from them.

Matzler et al. (2008) argues that personality traits such as conscientiousness, agreeableness, and openness effect knowledge sharing. Al-Zu'bi (2011) emphasizes that sportsmanship, conscientiousness, and altruism respectively have more influence on knowledge sharing than courtesy or civic virtue. The last research question was "How does perceived organizational justice influence organizational citizenship behavior?" Only hypothesis, H4 (Figure 3) was tested. Likewise, Aliei et al. (2011) suggested that OCBs are key factors in employee behavior. They highlighted that OCBs have a significant influence on knowledge sharing. Similar to previous research, the results here showed that organizational justice perception promoted organizational citizenship behavior in a posited direction (beta=.335). When looking at subscores, interactional justice predicted higher civic virtue, conscientiousness, altruism, courtesy, and sportsmanship. However, distributive justice predicted higher courtesy only. All results were controlling for education and role. Role was a significant predictor of organizational citizenship behavior. Being an assistant or technician predicted higher OCB scores, compared to being an expert.

Table 25

Results of Hypotheses Testing

Hypotheses	Results	Beta
H1: The greater the extent that the perceived organizational justice toward being conducive to share knowledge is, the greater the intention to share knowledge will be.	Supported	Beta=.333
H2: The greater the organizational justice perception is, the more favorable the attitudes toward knowledge sharing will be.	**NOT Supported**	**Beta=.052**
H3: The greater the organizational justice perception is, the greater the subjective norms to share knowledge will be.	Supported	Beta=.454
H4: The greater the organizational justice perception is, the stronger the organizational citizenship behavior will be.	Supported	Beta=.335
H5: The more favorable the attitudes toward knowledge sharing are, the greater the intention to share knowledge will be.	Supported	Beta=.105
H6: The greater the subjective norms to share knowledge are, the greater the intention to share knowledge will be.	Supported	Beta=.139
H7: The stronger the organizational citizenship behavior is, the greater the intention to share knowledge will be.	Supported	Beta=.288
H8: The greater the subjective norms to share knowledge are, the more favorable the attitude toward knowledge sharing will be.	Supported	Beta=.485

Limitations

Despite its numerous strengths, the research has a few weaknesses and limitations. The study measures only the TNP forensics' knowledge sharing behaviors, which may mean it cannot be generalized to other police forces. It is a self-administrated survey and the researcher collected information from well-motivated forensic employees. The proposed study employed a cross-sectional design, preventing the researcher from establishing causality between the variables with any degree of certainty.

Since the proposed study relies on self-reports and does not make use of other sources, common biases—such as consistency motif, social desirability, negative affectivity and leniency—may influence some of the results (Podsakoff et al., 2003; Spector, 2006). People tend to relate positive outcomes with their own qualities. In contrast, they ascribe negative consequences to external dynamics. This is referred to as attribution bias, which might be observed in this research since fairness perception is highly subjective and organizational citizenship behavior is a self-reporting quality.

Contributions of the Study

This research is the first study to investigate comparing organizational justice and organizational citizenship behavior with behavioral intention, as conceptualized with the Theory of Reasoned Action. The empirical evidence provided with this study support the concept that organizational justice influences knowledge sharing.

Regardless of the limitations, this study contributes to the research on knowledge sharing by exposing that organizational justice perception and organizational citizenship behaviors are related variables in determining the consequences related to knowledge sharing intentions. The study contributed to both organizational behavior literature and knowledge management

literature. Moreover, organizational justice and OCBs were studied in a knowledge management and sharing context for the first time among Turkish police officers.

Implications

This research attempted to explain perceptions about justice in the work place and behaviors about knowledge sharing with coworkers using a sample of forensics' in the Turkish National Police force. It used a model adopted from the TRA model and modified from the organizational behavior and knowledge management literature. The results found that the model was consistent with earlier research in knowledge sharing context, providingsupport for empirical research literature in a police organization. Therefore, this research has several implications to organizational behavior studies and knowledge management studies.

The TRA has been tested in several areas. However, these antecedent factors have not been studied in different sample groups. In this dissertation, the TRA was tested with organizational justice factors and organizational citizenship dimensions. This dissertation strengthens the theoretical foundation and improved our understanding of the facts about knowledge sharing practices. Bock et al.'s (2005), Ibragimova's (2006) and Crow et al.'s (2011) findings were tested here in a different culture and occupation. Thus, the study contributes toward generalizability discussions. Moreover, the study provided a comprehensive awareness about the role of organizational justice in the work place.

Future Research

In terms of generalization, future research might be conducted among different occupations where knowledge may be transformed into significant outcomes such as salary increase and promotion. For example, in Turkish National Police, promotion and salary is

regulated strictly regardless of the contribution to the intellectual capital of the organization. However, reward systems can be used more effectively in the private sector.

Parallel to the asymmetrical gender distribution among forensics, the number of female participants was significantly low. Therefore, none of the findings in this study revealed any relationship based on gender differences. For future studies, based on gender-balanced population may help to understand the role of gender in knowledge sharing.

In this study, organizational justice constructs were found to be significant determinants of attitudes toward knowledge sharing or the intention to share knowledge. However, the questionnaire was designed to use self-evaluation items. A questionnaire measuring different dimensions such as trust and satisfaction can help deepen our understanding. Moreover, with respect to the methodology, qualitative research methods or qualitative and quantitative methods combines should provide less biased results.

Concluding Remarks

This study placed emphasis on studying issues emerging from the results in order to increase intention to knowledge sharing and organizational justice perception. The data analysis showed that over all, organizational justice perception, organizational citizenship behaviors, and knowledge sharing intentions are significant and positively correlated.

First of all, distributive justice didn't relate to intention to knowledge sharing. I speculate that this might be due to a lack of performance evaluation or reward systems to encourage knowledge sharing. In governmental bodies such as law enforcement agencies, it is difficult to distribute rewards due to strict rules and regulations. Therefore, the benefits of knowledge sharing are not distributed righteously; organizational justice perception on intention to knowledge sharing is not significant.

Although organizational citizenship behavior had a positive and linear influence on intention to share knowledge, investigating subscores showed that civic virtue and conscientiousness predicted intention to share knowledge. I interpret this finding based on two reasons. First, the organization that I examined is a hierarchical, paramilitary organization. Second, the members are mostly sworn officers. Due to the nature of police work, employees' loyalty tends to overshadow the other qualities.

The attitudes toward knowledge sharing influenced intention to share knowledge. However, the assumption between organizational justice perception and attitudes toward knowledge sharing wasn't supported. I argue that attitudes are related to personal qualities more than perceptions or outside influences.

The roles of demographics are worth mentioning, too. Surprisingly, there was no observed difference between genders. Technicians, who assist experts with their general knowledge and expertise, tend to share their knowledge, while experts, who have critical knowledge and experience, were found to be less enthusiastic group about sharing their knowledge. Note that all of the technicians are also noncommissioned officers while the experts are commissioned officers, senior officers, and civilian staff members. Perhaps experts tend to hoard their knowledge since knowledge is considered as power.

Aside from supporting the hypotheses, the findings also revealed that the senior officers, who are experts in their role within the organization, have the strongest organizational justice perception. Meanwhile, noncommissioned officers, who are technicians in their role, bear positive but comparatively weaker feelings about the existing justice within the organization. I argue that those who satisfy their career expectations tend to have a higher justice perception. In conclusion, the representation of "knowledge" needs to be redefined in terms of the titles or the

positions of the employees providing an opportunity to have a better understanding of knowledge sharing behavior.

APPENDIX A

QUESTIONNAIRE-ENGLISH VERSION

University of North Texas Institutional Review Board

Informed Consent Notice

Dear Participant,

I, Ahmet Can, PhD student in Information Science at University of North Texas (UNT), seek your opinion as a forensic employed by the Department of Turkish Police Forensic Laboratories. Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

In this study, the researcher will investigate organizational justice perception, organizational citizenship behavior, attitude, and subjective norm that may or may not influence the knowledge sharing intention. Currently, there are no data from the forensics' perspective to indicate how organizational justice perceptions promote intention to share knowledge. You will be asked to fill out a survey which can take approximately 20-25 minutes to complete.

There are no foreseeable risks involved in this study.Participation in the study is completely voluntary. If you disagree to participate in the study, then simply don't take any action. Your decision to participate or to withdraw brings no penalty or loss of rights or benefitsthat you may discontinue at any time.

This study is not expected to be of any direct benefit to you. However, the findings of the study can provide a deeper understanding of the factors affecting forensic experts' organizational justice perceptions and its influence on intention to share knowledge. Therefore, the findings of the study may recommend communication and reward methods that improve the degree of organizational justice perceptions. Moreover, the study may generate awareness on influence of organizational justice, level of knowledge sharing, and importance of communication within members of the organization. Furthermore, the study may help the management to promote fairness at work environment.

Only group data will be aggregated and analyzed in this study. No personal identifiable information will be collected and the confidentiality of your individual information (if any) will be maintained in any publications or presentations regarding this study by keeping your responses confidential. Your privacy will be protected to the maximum extent allowable by law. You may keep this page for your records.

If you have any questions about the study, you may contact Ahmet Can at ahmet.can@unt.edu and +1 [redacted] or my dissertation advisor, Dr. Suliman Hawamdeh at Suliman.Hawamdeh@unt.edu.Moreover, this study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Your participation in the survey confirms that you have read all of the above and that you agree to all of the above mentioned. If you are willing to participate in this study please continue next page to start.

Thanks in advance for your contributions.

Organizational Justice Perception and its Effects on Intention to Share Knowledge Questionnaire

There is no right or wrong answer in this questionnaire.Please, read the statements below and mark the most appropriate option to you.
1= Totally disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Totally Agree

	1-Perceived Organizational Justice: This part of the scale is prepared to determine your level of organizational justice perception at work place that influences your intention to share knowledge.	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1	Evaluation is fair regardless of social networks related to education and location	1	2	3	4	5
2	Performance evaluation fairly reflects what employees have performed	1	2	3	4	5
3	Outside pressure does not influence performance evaluations	1	2	3	4	5
4	Standard criteria are used for evaluations	1	2	3	4	5
5	Employees and supervisors communicate during the evaluation period	1	2	3	4	5
6	My supervisor respects my opinion	1	2	3	4	5
7	My supervisor avoids personal prejudice	1	2	3	4	5
8	My supervisor treats me kindly	1	2	3	4	5
9	My supervisor respects my rights as a subordinate	1	2	3	4	5
10	My supervisor tries to be honest with me	1	2	3	4	5
11	I am rewarded for my work	1	2	3	4	5
12	Rewards are fair and fit with my previous work experience	1	2	3	4	5
13	I am rewarded fairly for what I do for the organization	1	2	3	4	5
14	Performance evaluations reflect my job responsibilities	1	2	3	4	5
15	Performance evaluations reflect my job difficulty	1	2	3	4	5

	2-Attitude toward Knowledge Sharing: This part of the scale is prepared to determine your attitude toward knowledge sharing with the other members of your organization.	Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1	My knowledge sharing with other organizational members is good.	1	2	3	4	5
2	My knowledge sharing with other organizational members is harmful.	1	2	3	4	5
3	My knowledge sharing with other organizational members is an enjoyable experience.	1	2	3	4	5
4	My knowledge sharing with other organizational members is valuable to me.	1	2	3	4	5
5	My knowledge sharing with other organizational members is a wise move.	1	2	3	4	5

3-Subjective Norm: This part of the scale is prepared to determine the subjective norms that you are influenced as you intend to share knowledge with the other members of your organization.	Totally Disagree	Disagree	Neutral	Agree	Totally Agree

1	My director thinks that I should share my knowledge with other members in the organization.	1	2	3	4	5
2	My supervisor thinks that I should share my knowledge with other members in the organization.	1	2	3	4	5
3	My colleagues think I should share my knowledge with other members in the organization.	1	2	3	4	5
4	Generally speaking, I try to follow the director's policy and intention.	1	2	3	4	5
5	Generally speaking, I accept and carry out my supervisor's decision even though it is different from mine.	1	2	3	4	5
6	Generally speaking, I respect and put in practice my colleague's decision.	1	2	3	4	5

4- Organizational Citizenship Behavior: This part of the scale is prepared to determine your existing organizational citizenship behaviors.		Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1	I help others who have been absent.	1	2	3	4	5
2	I help others who have heavy workloads	1	2	3	4	5
3	I willingly help others who have work related problems.	1	2	3	4	5
4	I help orient new people even though it is not required.	1	2	3	4	5
5	I am always ready to lend a helping hand to those around me.	1	2	3	4	5
6	I take steps to try to prevent problems with other workers.	1	2	3	4	5
7	I am mindful of how my behavior affects other people's jobs.	1	2	3	4	5
8	I do not abuse the rights of others.	1	2	3	4	5
9	I try to avoid creating problems for coworkers.	1	2	3	4	5
10	I consider the impact of my actions on coworkers.	1	2	3	4	5
11	I attend meetings that are not mandatory, but are considered important.	1	2	3	4	5
12	I attend functions that are not required, but help the company image.	1	2	3	4	5
13	I keep abreast of changes in the organization.	1	2	3	4	5
14	I read and keep up with organization announcements, memos, and so on.	1	2	3	4	5
15	I consume a lot of time complaining about trivial matters.	1	2	3	4	5
16	I always focus on what's wrong, rather than the positive side.	1	2	3	4	5
17	I tend to make "mountains out of molehills."	1	2	3	4	5
18	I always find fault with what the organization is doing.	1	2	3	4	5
19	I am the classic "squeaky wheel" that always needs greasing.	1	2	3	4	5
20	My attendance at work is above the norm.	1	2	3	4	5
21	I do not take extra breaks.	1	2	3	4	5
22	I obey company rules and regulations even when no one is watching.	1	2	3	4	5
23	I am one of the most conscientious employees.	1	2	3	4	5
24	I believe in giving an honest day's work for an honest day's pay.	1	2	3	4	5

5- Intention to Share Knowledge: This part of the scale is prepared to determine your intention to share knowledge with the others in the organization.		Totally Disagree	Disagree	Neutral	Agree	Totally Agree
1	I will share my work reports and official documents with members of my organization more frequently in the future.	1	2	3	4	5

2	I will always provide my manuals, methodologies and models for members of my organization.	1	2	3	4	5
3	I intend to share any articles from newspapers /magazines/ journals that I find useful and related to our work with members of my organization.	1	2	3	4	5
4	I intend to share my experience or know-how from work with other organizational members more frequently in the future	1	2	3	4	5
5	I will always provide my know-where or know-whom at the request of other organizational members.	1	2	3	4	5
6	I will try to share my expertise from my education or training with other organizational members in a more effective way.	1	2	3	4	5

Demographics

What is your gender? _____Male _____Female

What is your age? (Optional) I am _____ years old.

How long have you been working for the Turkish National Police? _____ Years.

How long have you been in your current department? _____ Years.

In which city your laboratory is located? _____

What department are you working at? (Optional) _____

What is your education level?	What is your rank or contract type?	
	Sworn Officer	Other Contracted Categories
_____High School	____ Police Officer/Constable	_____Biologist
_____Associate Degree	____ Head Police Officer	_____Chemist
_____College	____ Deputy Inspector	_____Chemical Engineer
_____Graduate	____ Inspector	_____Physicists
	____ Chief Inspector (Captain)	_____Physics engineer
	____ Major (Superintendent)	_____Other
	____ Police Director	

APPENDIX B

QUESTIONNAIRE-TURKISH VERSION

Kuzey Teksas Üniversitesi Denetleme Kurulu

Bilgilendirme Notu

Sayin Katilimci,

Amerika Birlesik Devletleri, Kuzey Texas Universitesin'de doktora egitimine devam etmekte olan ben, Ahmet Can, bir Kriminal Polis Laboratuari calisani olarak sizin gorusunuzden istifade etmek istiyorum. Bu çalışmaya katılmayi kabul etmeden önce calışmanın amacı, faydaları, riskleri ve nasıl yapılacagı ile ilgili asağıdaki açıklamaları okumanız önem arzetmektedir.

Bu calismada, orgutsel adalet algisi, orgutsel vatandaslik davranisi, genel tavir ve subjektif (kisisel) yargilarin bireysel bilgi paylasimi uzerine etkisi olup olmadigi hususu arastirilacaktir. Su ana kadar bu konu ile ilgili yapilmis herhangi bir calisma bulunmamaktadir.Bu arastirma sizlerin tamamlayacagi bir anket yardimiyla yapilacaktir. Anketi tamamlamaniz yaklasik 20-25 dakika kadar surecektir.

Bu calisma, ongorulebilen herhangi bir risk icermemektedir.Çalışmaya katılım tamamen gönüllülük esasına dayalıdır. Eğer çalışmaya katılmak istemiyorsanız, herhangi bir işlem yapmayınız. Katılmanın riski veya başladıktan sonra yarıda bırakmanın size herhangi bir yaptırımı yoktur.

Bu çalışmanın size doğrudan bir faydası yoktur. Ancak, çalışmanın sonuçları polis laboratuarlari calisanlarinin orgutsel adalet algilari ile bunlarin bilgi paylasimina etkilerini detaylı bir sekilde anlamamıza yardımcı olacaktır. Bu şekilde elde edilecek bulgular sayesinde, orgutsel adalet algisini olumlu yonde arttiracak iletisim ve odullendirme yontemleri tavsiye edilebilinir. Ayrica, bu calisma orgutici adaletin etkisi, bilgi paylasimi seviyesi ve calisanlar arasindaki iletisimin onemi hakkinda bir farkindalik dogurabilir. Ek olarak, bu calisma laboratuar yoneticilerine daha adil bir calisma ortami saglama konusunda yardimci olabilir.

Bu calisma icin sadece grup verileri toplanacak ve analiz edilecektir.Toplanacak bilgiler kişisel kimlik bilgilerini içermeyecek olup araştırma sonucunda yayınlanacak eserlerde (eğer var ise) kişisel bilgilerin gizliliği temin edilecektir. Kanunlar cercevesinde, anket sorularina verilecek cevaplar gizli tutulacaktir. Bu sayfayi kayıtlarınız için saklayabilirsiniz.

Çalışma hakkında herhangi bir sorunuz olursa, sahsimaahmet.can@unt.edu e-posta adresinden ve +1 [redacted] telefon numarasindan, tez danismanim Prof.Dr. Suliman Hawamdeh'e ise Suliman.Hawamdeh@unt.edu e-posta adresinden ulasabililirsiniz. Ayrica, bu çalışma Kuzey Teksas Üniversitesi (UNT) Denetleme Kurulu (IRB) tarafından incelenmiş olup, çalışmayla veya katılımcı hakları ile ilgili sorular için Universite Denetleme Kuruluna (IRB) +1-(940) 565 3940 nolu telefondan ulaşılabilir.

Bu ankete katiliminiz, yukarida bahsedilen hususlarin tamamini okudugunuzu ve belirtilen konular hakkinda herhangi bir cekinceniz olmadigini teyit etmektedir. Eger, bu calismaya katilmak istiyorsaniz baslamak icin lutfen bir sonraki sayfaya devam ediniz.

Katkilariniz icin simdiden tesekkurler,

Orgutsel Adalet Algisinin Bilgi Paylasimina Etkileri Anketi

Bu ankette dogru yada yanlis cevap yoktur. Lutfen, asagidaki onermeleri dikkatlice okuyunuz ve sonrasinda sizin icin en uygun olan secenegi isaretleyiniz.
1= Kesinlikle Katilmiyorum, 2= Katilmiyorum, 3= Ortadayim, 4= Katiliyorum, 5= Kesinlikle Katiliyorum

1-Orgutsel Adalet Algisi: Anketin bu bolumunde, isinize dair bilgilerinizi paylasmanizda etkisi oldugunu varsaydigimiz orgutsel adalet alginiz olculecektir.		Kesinlikle Katilmiyorum	Katilmiyorum	Ortadayim	Katiliyorum	Kesinlikle katiliyorum
1	Performans (sicil notu) degerlendirmesi, hemsehrilik,ayni okuldan mezun olma, ayni sosyal cevreye veya ortama sahip olma gibi sosyal iliski aglarina bakilmaksizin adil bir sekilde yapilmaktadir.	1	2	3	4	5
2	Performans (sicil notu) degerlendirmeleri calisanlarin isteki performansina gore adil bir sekilde yapilmaktadir.	1	2	3	4	5
3	Dis etkiler veya baskilar performans (sicil notu) degerlendirmesini etkilememektedir.	1	2	3	4	5
4	Performans (sicil notu) degerlendirmesinde herkes icin uygulanan standart olcme ve degerlendirme kriterleri kullanilmaktadir.	1	2	3	4	5
5	Tum calisanlar ve sicil amirleri performans (sicil notu) degerlendirmesi suresince iletisim halindedirler.	1	2	3	4	5
6	Amirim fikrime saygi gosterir.	1	2	3	4	5
7	Amirim degerlendirmelerinde onyargili degildir.	1	2	3	4	5
8	Amirim bana nezaket cercevesinde muamele eder.	1	2	3	4	5
9	Amirim, bir ast olarak var olan haklarima saygilidir.	1	2	3	4	5
10	Amirim bana karsi durust olma gayreti icerisindedir.	1	2	3	4	5
11	Calismalarimdan oturu odullendirilirim.	1	2	3	4	5
12	Odullendirme tecrubemle uyumlu bir sekilde adil ve yerindedir.	1	2	3	4	5
13	Teskilatim / Laboratuarim icin yaptiklarimdan oturu adil bir sekilde odullendirilirim.	1	2	3	4	5
14	Performans (sicil notu) degerlendirmeleri gorev ve sorumlulugumla uyumludur.	1	2	3	4	5
15	Performans (sicil notu) degerlendirmeleri isimin gucluklerini yansitir.	1	2	3	4	5

2-Bilgi Paylasmaya Yonelik Tavir: Anketin bu bolumunde, isinize dair bilgilerinizi paylasmanizda etkisi oldugunu degerlendirdigimiz tavirlariniz olculecektir.		Kesinlikle Katilmiyorum	Katilmiyorum	Ortadayim	Katiliyorum	Kesinlikle katiliyorum
1	Teskilattaki / Laboratuardaki diger calisanlarla bilgi paylasimim iyidir.	1	2	3	4	5
2	Is yerindeki / Laboratuardaki diger calisanlar ile bilgi paylasimim zarar verici niteliktedir.	1	2	3	4	5
3	Is yerindeki / Laboratuardaki diger calisanlar ile bilgi paylasimim eglenceli ve hos bir tecrubedir.	1	2	3	4	5
4	Is yerindeki / Laboratuardaki diger calisanlar ile bilgi paylasimim benim icin degerlidir.	1	2	3	4	5
5	Is yerindeki / Laboratuardaki diger calisanlar ile bilgi paylasimim bilgece	1	2	3	4	5

	(akillica) bir harekettir.					

3-Subjektif (Kisisel) Norm: Anketin bu bolumunde, isinize dair bilgilerinizi diger calisanlarla paylasmanizda paylasmanizda etkisi oldugunu degerlendirdigimiz subjektif (kisisel) normlar olculecektir.		Kesinlikle Katilmiyorum	Katilmiyorum	Ortadayim	Katiliyorum	Kesinlikle katiliyorum
1	Laboratuar mudurum bilgilerimi diger laboratuar calisanlari ile paylasmam gerektigini dusunur.	1	2	3	4	5
2	Sube mudurum bilgilerimi diger laboratuar calisanlari ile paylasmam gerektigini dusunur.	1	2	3	4	5
3	Mesai arkadaslarim bilgilerimi diger laboratuar calisanlari ile paylasmam gerektigini dusunur.	1	2	3	4	5
4	Genel konusmak gerekirse, Laboratuar Mudurunun politikalarini ve hedeflerini uygulamaya calisirim.	1	2	3	4	5
5	Genel konusmak gerekirse, sube mudurumun kararlarini benimkinden farkli dahi olsa kabul eder ve uygularim.	1	2	3	4	5
6	Genel konusmak gerekirse, mesai arkadaslarimin kararlarina saygi gosterir ve onlari uygulamaya koyarim.	1	2	3	4	5

4- Orgutsel Vatandaslik Davranislari: Anketin bu bolumu, sizin varolan orgutsel vatandaslik davranislarinizi olmek icin hazirlanmistir.		Kesinlikle Katilmiyorum	Katilmiyorum	Ortadayim	Katiliyorum	Kesinlikle katiliyorum
1	Is yerinde olmayanlarin islerine yardim ederim.	1	2	3	4	5
2	Asiri is yuku olanlara yardimci olurum.	1	2	3	4	5
3	Is ile ilgili sorunlari olanlara gonullu olarak yardimci olurum.	1	2	3	4	5
4	Gorevim olmasa da yeni baslayanlara isi ve is yerini tanitirim.	1	2	3	4	5
5	Etrafimdaki herkese yardim etmeye her zaman hazirim.	1	2	3	4	5
6	Diger calisanlarla problem yasamamak icin gerekli tedbirleri alirim.	1	2	3	4	5
7	Davranislarimin baskalarinin islerini nasil etkileyeceginin farkidayim.	1	2	3	4	5
8	Baskalarinin haklarini suistimal etmem.	1	2	3	4	5
9	Is arkadaslarima sorun cikarmaktan kacinirim.	1	2	3	4	5
10	Hareketlerimin is arkadaslarima karsi olabilecek etkisini goz onunde bulundururum.	1	2	3	4	5
11	Katilimi zorunlu olmayan fakat onemIi kabul edilen toplantilarda hazir bulunurum.	1	2	3	4	5
12	Katilim gerektirmeyen fakat teskilatin/laboratuarin imajina olumlu katkisi olacak etkinliklere katilirim.	1	2	3	4	5
13	Teskilat / Laboratuar icerisindeki degisiklikleri takip ederim.	1	2	3	4	5
14	Teskilat / Laboratuar ici yazismalari ve duyurulari okur ve takip ederim.	1	2	3	4	5
15	Onemsiz konulari sikayet ederek cok vakit harcarim.	1	2	3	4	5
16	Olumlu yonune bakmaktan daha ziyade, daima hatalara odaklanirim.	1	2	3	4	5
17	Pireyi deve yapmada ustume yoktur.	1	2	3	4	5
18	Teskilatin / Laboratuarin uygulamalarinda mutlaka hata bulurum.	1	2	3	4	5
19	“Aglamayana meme vermezler” diye dusunur ve hakkimi almak icin her zaman sesim yuksek cikar.	1	2	3	4	5

20	Mesaiye gelis ve gidis saatlerine olmasi gerekenden daha fazla uyarim.	1	2	3	4	5
21	Fazladan izin/mola almam veya kullanmam.	1	2	3	4	5
22	Kimse takip etmese de laboratuarin/teskilatin kural ve uygulamalarina uyarim	1	2	3	4	5
23	Kendimi isine en bagli calisanlardan birisi olarak goruyorum.	1	2	3	4	5
24	Isimin hakkini vererek maasimi hakettigime inaniyorum.	1	2	3	4	5

5- Bilgi Paylasim Niyeti: Anketin bu bolumunde orgutunuzun diger calisanlari ile gelecekte bilgilerinizi paylasma niyetiniz anlasilmaya calisilacaktir.		Kesinlikle KatilMiyorum	KatilMiyorum	Ortadayim	Katiliyorum	Kesinlikle katiliyorum
1	Gelecekte, yaptigim islere dair rapor ve resmi yazismalari, is arkadaslarimla daha siklikla paylasacagim	1	2	3	4	5
2	Isimi yaparken takip ettigim yontem ve modelleri, is talimatnamelerini mesai arkadaslarimla paylasacagim.	1	2	3	4	5
3	Isimizle ilgili gazete , dergi ve mesleki yayinlarda rastladigim ve faydali buldugum haber ve makaleleri mesai arkadaslarimla paylasacagim.	1	2	3	4	5
4	Gelecekte tecrubelerimi mesai arkadaslarimla daha siklikla paylasacagim.	1	2	3	4	5
5	Islerin nasil ve kimlerle yapilacagi konusundaki bilgilerimi mesai arkadaslarimin talepleri dogrultusunda paylasacagim.	1	2	3	4	5
6	Egitim aldigim konularla ilgili deneyimlerimi mesai arkadaslarimla daha etkili sekilde paylasacagim	1	2	3	4	5

Demografik Bilgiler

Cinsiyetiniz? _____Erkek _____Bayan

Yasiniz? (Belirtmek zorunda degilsiniz-Opsiyonel) Yasim _____.

Ne kadar suredir Emniyet Teskilati mensubusunuz? _____ yildir.

Ne kadar suredir Kriminal Polis Laboratuarlarinda gorev yapiyorsunuz? _____ yildir.

Calistiginiz Kriminal Polis Laboratuari hangi sehirde bulunmaktadir? _____

Hangi subede gorevlisiniz?(Belirtmek zorunda degilsiniz-Opsiyonel) _____

Lutfen size uygun olan secenegi isaretleyiniz Uzman_____ Asistan_____ Teknisyen_____

Egitim seviyeniz nedir?	Rutbeniz yada Istihdam sekliniz ile egitim alaniniz nedir?	
	Emniyet Hizmetleri Sinifi	SHS/GIH/Sozlesmeli Personel
_____Lise	____ Polis Memuru	_____Biyolog
_____Yuksek Okul	____ Bas Polis Memuru	_____Kimyager

_____Universite _____Yuksek Lisans/Doktora	____ Komiser Yardimcisi ____ Komiser ____ Baskomiser ____ Emniyet Amiri ____ Emniyet Muduru	_____Kimya Muhendisi _____Fizikci _____Fizik Muhendisi _____Diger

APPENDIX C

RESEARCH APPROVAL FROM THE TNP TO IRB

TURKISH NATIONAL POLICE
Department of Foreign Relations
Office of the Graduate Programs Coordinator

English Translation of the
General Research Approval Form given by the Turkish National Police (TNP)

NO: B.05.1.EGM.0.76.04.02/2939
DATE: 07/06/2007
TOPIC: A General Research Approval Form
REFERENCES: a) dated 23.03.2007 and B.05.1.EGM.076.04.02 (310041.871/1501 numbered document.
b) dated 12.04.2007 and B.05.1.EGM.0.72.02.03-857-1480 numbered document
FROM: Dr. Recep GULTEKIN
Director, Foreign Affair Division
1st Degree Chief of Police

TO: Samih TEYMUR (USA), Isa CIFTCI (GERMANY), Fatih YAMAC (FRANCE), Fatih OZGUL (ENGLAND), Murat GULVER (BELGIUM).
E-MAILS: tipscontact@gmail.com, yamacfatih@yahoo.fr, isaciftci@yahoo.com, faith.ozgul@gmail.com and murutgulver@yahoo.com

With the written document referenced above (a), it was requested from the Education Division that a general research approval form be obtained from the General Directorate of the Turkish National Police (TNP) for personnel of the police who are pursuing a master and doctoral degree to conduct academic research project and study, to conduct any means of data collection method such as survey, interview, and retrieving a variety of statistical data from all police departments including the central organization.

With the document (b) taken from the Division mentioned above, in accordance with the provisions of the Civil Servants Act with regard to those who will be sent abroad for professional training, police officers of the Turkish National Police who have been sent abroad to follow their masters and doctoral degrees in different universities have been granted permission to conduct academic studies in any division of the TNP and in any province police department if they demand to do so, and a copy of the document was attached.

Sincerely yours.

(Signed)
Dr. Recep GULTEKIN
Director, Foreign Affair Division
1st Degree Chief of Police

APPENDIX D

RESEARCH REQUEST FROM THE TNP TURKISH

T.C.
İÇİŞLERİ BAKANLIĞI
Emniyet Genel Müdürlüğü

.../04/2007

Sayı : B.05.1.EGM.0.72.02.03/857
Konu : Akademik Çalışma

GENEL MÜDÜRLÜK MAKAMINA

Yetiştirilmek Amacıyla Yurtdışına Gönderilecek Devlet Memurları Hakkındaki Yönetmelik hükümleri çerçevesinde yurtdışındaki üniversitelere master ve doktora yapmak üzere gönderilen personelin tez çalışması aşamasında Genel Müdürlüğümüzün çeşitli birimlerinden veri toplamak, teşkilatın belirli birimleri ve personeli ile anket ve görüşme talebinde bulunmakta, Emniyet Genel Müdürlüğü Eğitim Dairesi Başkanlığı Kuruluş, Görev ve Çalışma Yönetmeliğinin 24/g maddesi "Teşkilat personeli veya akademik çalışmalarda bulunanların anket uygulama çalışmaları ile ilgili işlemleri yürütmek" hükmü gereğince akademik çalışma yapmak üzere başvuran personelin talepleri değerlendirilmektedir.

Yurtdışında master ve doktora yapmakta olan teşkilat personelinin tez çalışmasında kullanmak üzere talep ettikleri verileri, suç istatistiklerini alma, anket ve görüşme gibi araştırma metotlarını uygulama konularında Genel Müdürlük Makamından genel bir onay alınması ve bu onayın tüm teşkilatımıza duyurulması TIPS ABD Genel Koordinatörü 4.Sınıf Emniyet Müdürü Samih TEMUR tarafından verilmiş olan dilekçe ile talep edilmektedir.

Yetiştirilmek Amacıyla Yurtdışına Gönderilecek Devlet Memurları Hakkındaki Yönetmelik hükümleri çerçevesinde yurtdışındaki üniversitelere master ve doktora yapmak üzere gönderilen personel Devlet Personel Başkanlığınca verilen kontenjanlar oranında gönderilmekte ve tez konuları Genel Müdürlükçe belirlenmektedir.

Bu nedenle, Yetiştirilmek Amacıyla Yurtdışına Gönderilecek Devlet Memurları Hakkındaki Yönetmelik hükümleri çerçevesinde yurtdışı master ve doktora eğitimine gönderilen personele Genel Müdürlümüze bağlı birimlerde ve taşra teşkilatında akademik çalışma yapma talebinde bulunması halinde tez çalışması yapabilmesi hususunu onaylarınıza arz ederim

Mustafa ÇANKAL
Eğitim Dairesi Başkanı
1.Sınıf Emniyet Müdürü

Uygun Görüşle Arz Ederim.
07/04/2007

Dr. Necati ALTINTAŞ
Emniyet Genel Müdür Yardımcısı
1.Sınıf Emniyet Müdürü

O L U R
07/04/2007

Oğuz Kağan KÖKSAL
Emniyet Genel Müdürü
Vali

APPENDIX E

RESEARCH REQUEST FROM THE TNP ENGLISH

Turkish Republic (T.C.)
INTERIOR MINISTRY
Turkish National Police (TNP)

Reference: B.05.1.EGM.0.72.02.03/857
Topic: Academic Research

TO TNP GENERAL DIRECTORATE

In the scope of "Regulations of Civil Servant Who Is Sent to Abroad", requests of TNP personnel, who have been sent abroad for pursuing their master and doctorate degrees, to use their academic research including collecting data and surveying in every departments of the TNP have being evaluated according to 24/g article, that is to execute procedures relating about personnel's demands of surveying, of Turkish National Police Education Department Establishing, Duty and Working Regulations.

Request letter which is about both giving a general approval by TNP General Directorate about having crime records, surveying, and interviewing which are related about research methods, and announcing that approval to TNP personnel who have been sent abroad for having their master and doctorate degrees is demanding by Samih Temur, fourth-class-chief superintendent and director of Turkish Institute Police Studies (TIPS).

In the scope of "Regulations of Civil Servant Who Is Sent to Abroad", those who go abroad to pursue master or doctorate degrees are sent by T.C. State Personnel Department, and research subjects are determined by TNP General Directorate.

For this reason, in the scope of "Regulations of Civil Servant Who Is Sent to Abroad", I present this approval which is about academic researching in any department of TNP.

SIGNATURE
Mustafa Cankal
The Head of Education Department
1st Degree Police Chief

Presenting with agreeable decision.
04/07/2007

SIGNATURE
Dr. Necati Altintas
Deputy of TNP General Directorate

OK (Approval)
04/07/2007

SIGNATURE
Oguz Kaan Koksal
TNP General Directorate Governor

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